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Editor: William Glock

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MOZART'S PIANOFORTE MUSIC
SOME ASPECTS OF ITS INTERPRETATION

Fritz Rothschild

It is generally held that great composers never submit to the limitations of prevailing rules and conventions. Yet in their early years they all of them study and observe the rules of composition and interpretation of their period. Only when a composer has reached the height of his development does he have to decide whether the existing conventions allow him freedom enough to convey his ideas adequately.

Mozart died too young to have been faced with such a decision; but the compositions of the last ten years of his life make it seem certain that he would have found new means of expression.

Up to 1781 Mozart's compositions (including most of his pianoforte sonatas) were still under the influence of the *Style Galant,* which had been created shortly after 1700 by progressive musicians who still accepted many rules and conventions of the past but added others in order to be able to express their advanced ideas.

One of the most important of these new conventions concerned the treatment of tempo and rhythmic pattern in *Allegro* movements. In the year 1781 Haydn broke this convention in his 'Russian' string quartets, of which he himself wrote that they were composed in a 'new and special manner'. Later in this article I shall have more to say about this innovation.

With his keen perception and imagination, Mozart must have realized the great possibilities of Haydn's 'new and special manner'. In 1782 he tried it out in six string quartets which he dedicated to Haydn, and he never returned to the former conventions. Thus the year 1781 marks a dividing line in Mozart's compositions, those after this date being differently composed and—no doubt—differently performed in his time.

Since the early 19th century, instrumental technique of almost every kind, and especially that of the pianoforte, has changed tremendously. Nowadays pianoforte music, including Mozart's, is played *legato* unless otherwise marked; yet the practice of taking *legato* for granted as the ordinary manner of playing came in only with Muzio Clementi and Karl Czerny. They both wrote in their pianoforte tutors that one should always play *legato* if nothing is marked. Karl Czerny says in his *Pianoforte Schule*:

' The ordinary *legato* is shown by slurs. It must also be used in all cases where the composer has not indicated any particular expression, for in music *legato* is the rule and all other modes are only exceptions.'

But in a later chapter, Czerny describes Mozart's own playing as follows:

' A clear and already very brilliant style more inclined to *staccato* than to *legato*; a subtle and spirited rendering.   The pedal hardly ever used and never necessary.'

Another point on which we lay great importance in our present performances of Mozart is the rendering of the melodic line. This decides for us not only the phrasing but also the accentuation and to a certain extent even the tempo of the music.   Of course the melody was always important but the supremacy of the melodic line was quite unknown before the 19th century.   We must remember that Mozart received his musical education from his father Leopold, who wrote ' Der Tact macht die Melodie ' (*Violinschule*, 1756).   And in Mozart's early letters we find ample proof that his father's ideas and opinions greatly influenced him.

The rules and conventions observed by W. A. Mozart and his contemporaries were described not only by Leopold Mozart but also in many other books written between 1750 and the end of the century.   Best known were the writings of Joachim Quantz, Friedrich Wilhelm Marpurg, C. P. E. Bach, Johann Georg Sulzer, and Daniel Gottlob Türk.   D. G. Türk's *Klavierschule für Lehrer und Lernende* was first published in 1789 and appeared in a revised and greatly enlarged edition in 1802.   It is a very comprehensive work on the interpretation of 18th century keyboard music, with several references to Mozart's pianoforte sonatas; and being based on most of the important writings of Türk's predecessors, it reads almost like a compendium of musical interpretation in the second half of the 18th century.

In Mozart's time the pianoforte became one of the most popular instruments and a great deal of attention was devoted to problems of pianoforte technique. In the books by C. P. E. Bach and Marpurg, and of course in Türk's *Klavierschule*, we find many precise descriptions of pianoforte playing; and since all these descriptions are essentially alike we can safely apply them to Mozart's pianoforte compositions.

In his *Anleitung zum Klavierspielen* (Berlin, 1755), Friedrich Marpurg, explaining the different kinds of touch on the pianoforte, defines *legato* and *staccato* briefly and then continues:

' In contrast to *legato* and *staccato* is the ordinary style of playing in which the finger is lifted from the key just before the following note is played.   This ordinary style—being always taken for granted—is never marked.'

And on the same subject, but at greater length, D. G. Türk writes in his *Klavierschule* of 1789:

'The *staccato,* as we know, is marked by dashes (a) or by dots (b) above (or below) the notes. If an entire piece, or its main part, or often only a single phrase should be so rendered, this is indicated by the term *staccato* set at the beginning of the piece or part which should be played in this manner.
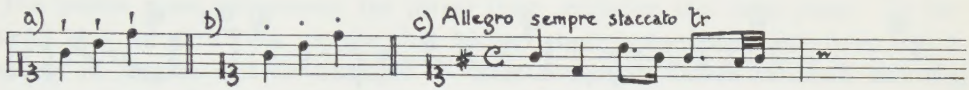
'The signs in (a) and (b) have the same meaning: yet with some composers. dashes indicate a still shorter holding of the notes than dots. . . . It should hardly be necessary to mention that *staccato* can also be played softly; still, some pianists, contrary to directions, play *staccato* always *forte.* . . .

'*Legato* is usually indicated by a slur, as shown in the following examples. . . . . In *legato* the fingers should remain on the keys for the entire value of the notes in order to avoid even the slightest separation between them.
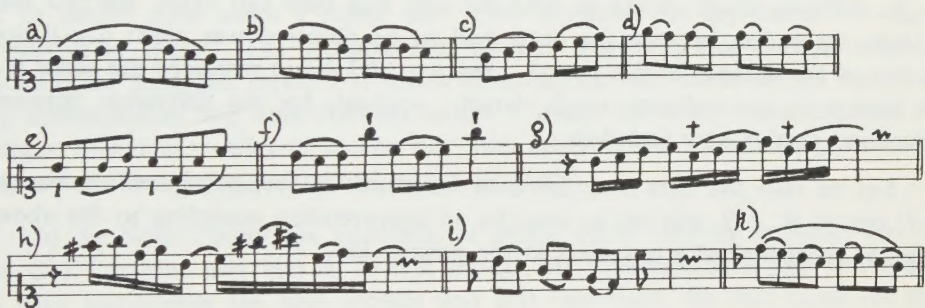
'In (a) eight notes are slurred, in (b) four and four. In addition one must observe a slight stress (hardly noticeable) on the first note under a slur. In example (g) this gentle stress . . . is on the notes marked thus: +, even though they are weak notes; in example (h) it is on F sharp, D, B, etc. The notation in (k) indicates that all notes are slurred but with a gentle stress on the first, third, fifth and seventh note. . . . Sometimes certain notes should be *legato* and others *staccato.* This is usually shown as in (a) in the next example. In (b) I have written out the correct performance while (c) and (d) are incorrect.

'Playing in the ordinary manner—neither *staccato* nor *legato*—means that the notes should be held for slightly less than their full value. Thus the notes in example (a) below should be played as shown in (b) and (c). If certain notes should be held for their full value, *ten.* or *tenuto* is written above them as in (d).
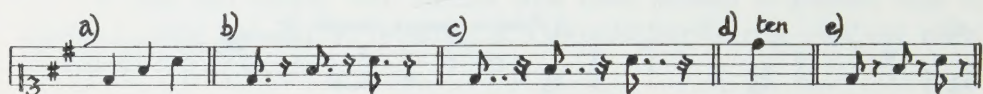
' Bach[1] said on page 112: " Notes which are neither *staccato* nor *legato* (or *tenuto*) are held for half their full value." Yet in general I do not think that that is the best manner of playing, for three reasons: (1) the character of the music might require various modifications; (2) it almost cancels the difference between *staccato* and the ordinary touch; (3) a performance would sound too choppy if all the notes in *non legato* were held for only half their value, with a rest on the other half as shown above in example (e).'

But although Türk did not subscribe to C. P. E. Bach's opinion that the notes in the ordinary touch should be held for only half their full value, the fact that a slight separation between the notes had to be observed was never questioned by any of the authors of this period. *Staccato* and *legato* remained the same but the change in the ordinary touch largely accounts for the difference between pianoforte playing now and then.

Let me take five bars from the third movement of Mozart's pianoforte sonata in C major, K. 279, and try to describe an interpretation according to the above rules, as compared with our ideas at the present day.
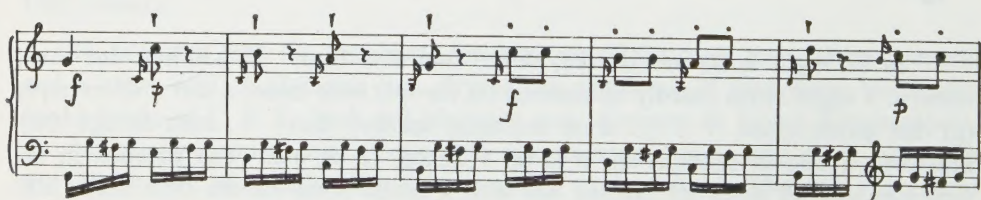
To-day the eight semiquavers of each bar in the left hand are played *legato*, while the grace notes in the right hand are very short.   In Mozart's time the semiquavers were slightly separated from each other. The first crotchet in the right hand was held for its proper value and thus the finger playing this note had to be lifted together with the finger playing the fourth semiquaver in the left hand. Again, the first crotchet in the right hand and the first four semiquavers in the left hand are marked *forte*; and as there is no *decrescendo* the change from *forte*

[1]C. P. E. Bach in the *Versuch einer Anweisung über die wahre Art das Klavier zu spielen*, 1753 New edition, 1787.

to *piano* requires a slightly longer separation between the fourth and the fifth semiquavers. Moreover (according to Türk) the grace notes turned the quavers into semiquavers, and the dash over them again shortened their value, so that the quavers were actually played like demi-semiquavers, and were consequently shorter than the semiquavers in the left hand, though these were slightly shortened as well. The dashes must not prevent the player from rendering the notes *piano*. In the third and the fifth bars we see that Mozart used both dashes and dots, which seems to suggest that he belonged to those composers who indicated different grades of *staccato* by the two different signs. This short example shows how far we are from the manner of playing in Mozart's day and how a lapse of time can obscure a composer's intentions.

Even the most skilful pianist could not play with great speed if he observed all these rules. Yet the movement is marked *Allegro,* which leads to another problem—and rather an important one—namely, what pace was meant by the term *Allegro* in Mozart's time?

The idea of tempo in the *Style Galant* was by no means the same as that of the 19th century or to-day, for it was still influenced by the rules and conventions of an earlier style which I called the ' Old Tradition ' in my book, *The Lost Tradition in Music.* The composers of the Old Tradition used Italian terms to indicate not pace, but rather a rhythmic characteristic that could not be conveyed by time-signature and note contents alone. To-day the same terms are used as tempo directions: *Allegro* means fast and therefore its interpretation usually depends on the player's individual notion of 'fast'.

In the *Style Galant* the approach to tempo stood midway between that of the Old Tradition and that of to-day; though the time-signatures had lost much of their significance the note content was still important; the fast notes (as the smallest note values used to be called) together with the Italian terms indicated the tempo.

Joachim Quantz made the first systematic attempt to measure pace and he used the rate of the human pulse as his standard. On this basis he established *Allegretto* as 80 crotchets to the minute, i.e., M.M. $\downarrow$ =80. *Allegro assai* was $\downarrow$ =80 and *Allegro* proper he placed between *Allegretto* and *Allegro assai* with $\downarrow$ =120.

Quantz distinguished between a moderately fast and a fast group of *Allegro* movements. The moderately fast group consisted of *Allegretto, Allegro ma non troppo, Allegro moderato, Allegro ma non presto* and the fast group of *Allegro assai, Allegro di molto* and *Presto.* Quantz allowed for all the movements of the moderately fast group $\downarrow$ =80 and of the fast group $\downarrow$ =80. With this classification Quantz gave not only the pace for each group but also its rhythmic pattern, for he measured the moderately fast movements by crotchets (thus indicating that an *Allegretto,* for instance, had four beats in C common time) and the fast

movements by minims, showing that *Allegro assai,* etc., had two stresses in C common time. In 3/4 time the moderately fast movements had three stresses in the bar and the fast movements one stress. Quantz put *Allegro* proper between *Allegretto* and *Allegro assai* (𝅘𝅥 =120) without qualifying it, probably for the reason that it could adopt the rhythmic pattern of both: the moderately fast and the fast *Allegro.*

Haydn broke with this long-established convention that different pace had to be reflected in a different rhythmic pattern. In the ' Russian' string quartets both *Allegro* groups—the moderately fast and the fast—though different in pace had one and the same rhythmic pattern, namely that of the fast *Allegro* group.

Let me illustrate Haydn's ' new and special manner' with four examples from string quartets, two by Haydn and two by Mozart. The first is from the quartet in E flat, Op. 20, No. 1, and the second is from the ' Russian' quartet, Op. 33, No. 1. Of the two examples from Mozart, the first—like Haydn's Op. 20—was written before 1781 and the second is from the six string quartets written after 1781 and dedicated to Haydn.
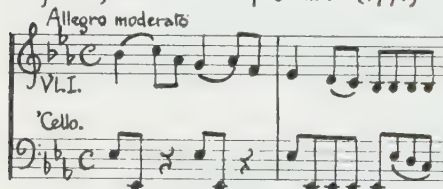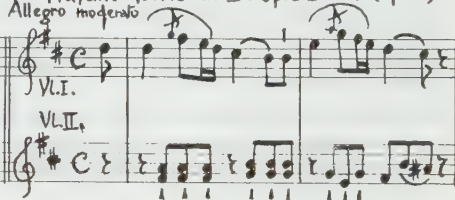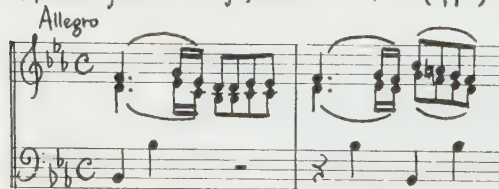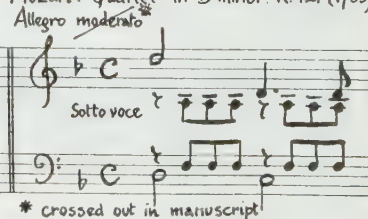
In the two earlier quartets all time units (crotchets) would have been stressed; this rhythmic pattern had to be maintained throughout the whole movement. But in both the later quartets there were only two stresses in the bar. Again this rhythmic pattern had to be maintained throughout the whole movement. After 1781 all *Allegro* marks from *Allegretto* or *Allegro moderato* to *Prestissimo* had the rhythmic pattern of the fast *Allegro* group (see Quantz). From then on, *Allegro* meant fast and no longer gay.

It seems that Haydn's innovation very soon became known and was accepted by many of his contemporaries. Türk wrote in his *Klavierschule*:

'Some music teachers divide all the above-mentioned degrees of pace into four groups. The first group includes all very fast movements: *Presto, Allegro assai*, etc., the second group the moderately fast movements, like *Allegro moderato, Allegretto*, etc., the third all moderately slow movements, such as *Un poco Adagio, Larghetto, Poco Andante*, etc., and the fourth all very slow movements: *Largo, Adagio molto*, etc.

'Others allow only three groups, namely: (1) the fast, as for example *Prestissimo, Presto, Allegro assai, Allegro, Allegretto*, etc.; (2) the moderate, including *Andante, Andantino*, etc.; (3) the slow, such as *Largo, Adagio*, etc.'

The system of four groups comes from Quantz. But to the best of my knowledge the system of three groups is never mentioned in any book before 1781 and one can assume that it originated with Haydn's 'Russian' quartets.

The following beginnings of two sonatas by Mozart also show the different rhythmic pattern before and after 1781.
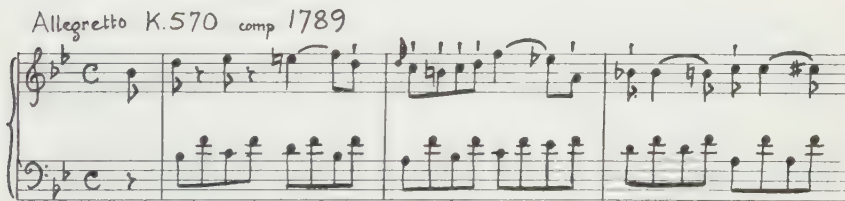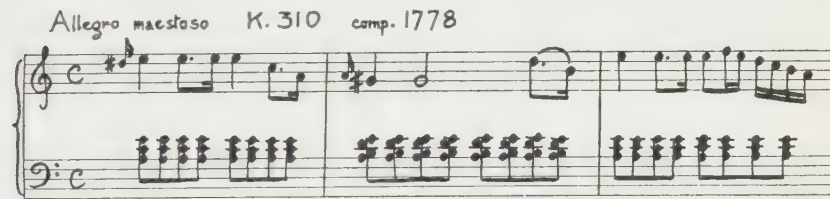
I am convinced that the tempo of *Allegro* marks in Mozart's time was much the same as defined by Quantz; and this opinion is supported by the writings of Türk and E. W. Wolf. Türk wrote in his *Klavierschule*:

'Even though this manner of measuring (by pulse beats) has shortcomings, as Quantz himself has realized, and though the difference between *Allegro assai* and *Adagio molto* is somewhat too large, I am still very much inclined to advise beginners to observe this rule, as it will at least teach them that *Allegro assai* should be played approximately twice as fast as *Allegretto*, etc. . . .'

And in his *Musikalischer Unterricht* of 1788 E. W. Wolf wrote:

' As to the tempo of our present *Allegretto,* its minim is equivalent to a crotchet of an *Andante,* which expresses the natural pace of walking.'

Allegro maestoso was slightly slower than *Allegro* proper.   Leopold Mozart characterized it as majestic, deliberate, not rushed.

In both the above examples, the accompaniment has eight quavers in the bar. But whereas the *Allegro maestoso* has four stresses, the *Allegretto,* which was composed after 1781, has only two stresses in the bar.

This rhythmic pattern was never indicated by signs but was nevertheless always observed. It was only when a composer wanted to cancel the conventional pattern of stresses that he had to indicate this fact expressly. Before 1781 the four stresses in C common time, for instance, were not played with equal emphasis; the first stress received most, the second less emphasis, the third more than the second but less than the first and the fourth stress received the same emphasis as the second.

In J. G. Sulzer's *Allgemeine Theorie der schönen Künste* the different degrees of emphasis are explained by the following table:
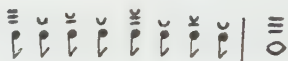
If we apply this system to the first three bars of Mozart's A minor sonata, K. 310 (composed in 1778), the result would be:

The musicians of the *Style Galant* had not only to observe the conventional accentuation within a bar but also to know the degree of emphasis the first note of a phrase should receive. D. G. Türk gave a precise description in his *Klavierschule*:

' Though it is of great importance to give emphasis to the first note of a phrase . . . it is equally important to be aware of the fact that such an emphasis should be given to this note only if it coincides with the strong pulse. Thus the note marked with **o** in the sixth bar must be played with less emphasis than the

following B, although it is the note which begins a phrase marked *forte*.   This rule is often ignored and one frequently hears a passing note in a *forte* phrase played just as loudly as a note which coincides with the strong pulse.

' By the number of crosses (+) I indicate the degree of emphasis.'

It is often said that great music loses none of its beauty and impressiveness if interpreted according to modern ideas; or even that the art of the past is brought nearer to our understanding if its interpretation is adjusted to our contemporary taste.

Though it is true that nothing can alter the intrinsic value of the greatest works, yet I firmly believe that every musician—regardless of his point of view —should, before he decides on his interpretation, be acquainted with the rules and conventions which guided the composers of the past in writing their works.

THE TEACHING AND IDEAS OF BORIS BLACHER

Francis Burt

Boris Blacher has been teaching composition in Berlin for some twenty years. During this time a very large number of young composers have studied with him. One might mention, for example, Gottfried von Einem, among the already well known, and Giselher Klebe and Heimo Erbse among those who are rapidly gaining a high reputation. Until a year ago, when his new position as director of the *Hochschule für Musik* in Berlin left him with very little time for teaching, leading young composers came from all over Germany, and indeed from everywhere abroad, to consult him.

The remarkable thing about his pupils is that, apart from a certain pre-occupation with rhythm, they write in such a wide variety of styles. In no sense do they form a school of composers, the only factor common to them all being a very high standard of professional competence. To describe Blacher's methods would be simple if he had a definite system. But he has not; and this being so, one can only hope that, by relating his ideas upon various aspects of music, the general point of view which inspires his teaching will be made clear.

Those readers who were at the Summer School at Bryanston in 1949 and 1950 will recall the great experience of music which Blacher brings to his teaching, the disconcerting habit of saying, while analyzing a work, 'You remember in that Mozart violin sonata where, in the recapitulation of the first movement, the accompaniment figure in the bass . . .' Of course no-one does remember but it is this wide knowledge, combined with the type of intellect which, in comparing and generalizing, can always grasp the essentials of a problem, that lies at the root of his success as a teacher. Thus, when criticizing a student's work, he will very rarely make a point of detail. At first he may perhaps appear to be doing so, but one soon realizes that he is in fact giving a concrete illustration of certain fundamental principles.

I remember taking to him at Bryanston a (very bad) wind trio. One movement began with a slow tune, which was intended to be of the classical, symmetrical type—A_1, B, A_2, C, where A_2 is a repetition of A_1 in another key. Blacher's immediate reaction to this was to tell me to alter the beginning of A_2 so that it would not be an exact repetition of A_1. The reason he gave for this suggestion was that the tune and its accompaniment were so chromatic that there was no

tonal tension between A_1 and A_2. The latter would therefore sound merely like a beginning again and would not, as in the true classical melody, cause the music to move forward by the building up of tonal tension.

This criticism implies Blacher's entire attitude to harmony and tonality. In classical music, where the harmony was simple and the tonality very clear, the main weight of the structure could be carried by the latter, but as soon as harmony becomes chromatic and dissonant to such an extent that the tonality ceases to be clear, one no longer has much help from these two elements. Blacher therefore thinks of harmony primarily as the progression of parts, as a means of moving forward. Tonality must either be strongly emphasized, as by Stravinsky in some of his later works, or one must be careful not to put much structural weight upon it.

From this point of view Blacher severely criticizes Hindemith's harmonic system. The reader will recall that the essentials of this are contained in a method of classifying all possible chords in such a way that any chord can be placed in a scale of relative dissonance, and any series of chords, no matter how dissonant, can be shown to have a definite tonality. In addition, any music in the European tradition that does not conform to the system, such as twelve-tone music for example, is held to be invalid or, at the minimum, to betray errors in technique.

Using this method, Hindemith analyzes classical music to show how it is built up of arcs of harmonic and tonal tension, beginning with consonance and rising, at the point of highest tension, to the greatest (relative) dissonance. In his own music he attempts to do the same but, at the points of highest tension, the dissonance and chromaticism are so great that it is no use pretending that tonal tension can any longer be discerned, except of course by the industrious admirer who sits down with his chart of chords and analyzes the passage. It therefore sounds merely incongruous when, at the end of the arc, Hindemith returns to consonance and, often with a classical V–I cadence, arrives at another clear tonality.

Further, when Hindemith condemns twelve-tone music, he does so because its harmony is not based on the relationships of the overtone series; but when, in his book *The Craft of Musical Composition,* he derives his chromatic scale from the series, he uses only the first six overtones (six including the fundamental, according to his nomenclature). The seventh overtone (B flat, from fundamental tone C) he rejects, as it would lead him to 'terrifying results'. This is undoubtedly true, but how can one maintain that the frequency ratios of the first six overtones $(1:2, 2:3, \ldots 5:6)$ are holy and immutable laws of nature and at the same time reject that between the sixth and seventh as unworkable? In addition Hindemith maintains that the unequal semitonal steps between the notes of his scale indicate the relations of the individual notes to their progenitor, but they also lead him to 'impure' intervals within his scale, i.e., the fourth E flat–B flat has a frequency ratio of $2.96:4$ instead of $3:4$. As the notes B flat and E flat do not stand in a very close relationship to their progenitor C, Hindemith might maintain that this impure fourth mirrors that to be found high in the natural series between the eleventh and fifteenth overtones. However, he rejects all overtones above the sixth and cannot therefore use them to defend his inability to produce

a scale in which all fourths and fifths are pure.   In fact the whole calculation seems to be based on expediency rather than logic.   At one point in the argument, he grants that the ear can tolerate a certain margin of error.   Yet he can make the following statements : —

> 'It (the ear) hears simple ratios as beautiful and correct sounds, and it recognizes perfectly that the purity of the octave, the fifth or the fourth is clouded when the proportions of length or vibration frequency are not in the ratios of $1:2$, $2:3$, or $3:4$ . . . .   When vibration combinations in the simple ratios of $1:2$, $2:3$, or $3:4$ strike this (the Cortian) organ, they excite particular parts of its harmoniously designed structure, which distils from the feeling of correctness the most intense pleasure.'   (*Op. cit.*, page 23.)

> 'Other divisions (of the entire tonal supply to form scales), such as the tetrachord system of the ancient Greeks, based on the fourth, or some scales of Arabian music which avoid the octave, are artificial structures, taking little heed of the overtone structure, and do not adapt themselves to our purpose.' (*Op. cit.*, page 25.)

Are we to assume that the Cortian organs of the Arabs, or for that matter of those peoples of the Far East who do not use a pure fifth in their scales, fail to distil a feeling of intense pleasure from their music?   Would it not be more reasonable to believe that an 'artificial' music, not based on the overtone series, can satisfy those who are accustomed to it?

I have dwelt at some length on this question because I have several times heard people in England using Hindemith's condemnation of twelve-tone music as sufficient reason for saving themselves the trouble of coming to terms with it.   However, whereas Blacher thinks such music perfectly valid and has indeed written two twelve-tone works in order to come to a better understanding of it, it is unlikely that he would ever become a regular 'twelve-tone composer', as his interests do not lie in that direction.   Schönberg developed the late romantic harmony of Wagner and Wolf to the point where it became completely amorphous. He therefore had either to undo the last hundred years of development in German harmony and attempt to re-instate tonality in its previous rôle, or find another way of controlling the harmonic material which he had produced.   He chose the latter alternative and developed the twelve-tone method.   Stravinsky, growing out of a different harmonic tradition, was presented with the dilemma in a less acute form and could logically take the former.   It might seem that no other alternative is possible.   Nevertheless, Blacher has followed a different direction; that is, he has removed harmony from the centre of pre-occupation.

This may seem a very questionable solution to the problem, but it is only so when one fails to realize that, at all times in the history of music, the interest of composers has been centred on one or two elements at the expense of others, and when these elements have reached a point where they are incapable of further development in that particular context, or where they have started to decay, the next generation of composers solves the problem by concentrating on others.   Thus

the composers of the late sixteenth century concentrated on melodic line and counterpoint at the expense of harmony, whereas their successors in the early seventeenth century abandoned counterpoint almost entirely in order to indulge in harmonic experiments. Similarly, in the nineteenth century, and in many cases right up to the present day, I think it true to say that at least in Germany attention was centred on harmony, while rhythm sank to a nadir of debility never before seen in European music. It would therefore seem not illogical for Blacher to preoccupy himself with rhythm rather than harmony.

This he has in fact done, and to express it in this way is more strictly accurate than to say that he has *removed* harmony from the central position, for he has never been very interested in the latter. Stravinsky has of course preceded him, but the interest of the two composers in rhythm is focused in a rather different way. Stravinsky tends to set his music in a somewhat static position and to keep it developing by concentrating on the rhythmic element alone. Extreme examples of this are of course to be found in those numbers of the *Rite of Spring* where practically the entire weight of the structure is carried by the rhythm; but in his later music, the slow rate of harmonic movement which results from this procedure also enables him to clarify his tonal position while still using a considerably dissonant harmony. Blacher, on the other hand, tends much less often to use rhythm as an element by itself, and, when he does, it is in such a way as to avoid breaking the pulse of the piece and thus slowing down the pace, for it is character-istic of his music that it should move much faster than Stravinsky's. In this it is helped by his harmony, with its concentration on a simple progression of parts, as I said before; and above all by his use of rhythm in connexion with melody.

It is the latter which is of importance to us here, for it has considerable influence on Blacher's teaching. It was typical of him to have suggested a purely rhythmic alteration to the tune of my wind trio, mentioned earlier on. For A₂, instead of simply repeating A₁, note for note but at a different pitch, he suggested changing the rhythm of the first note in the following way:—
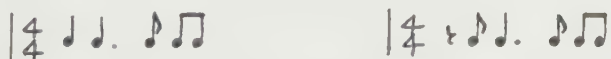
The effect was to give a forward impulse to the music which overcame the lack of tonal tension between A₁ and A₂, and such use of rhythmic asymmetry is one of the most important things he shows when analyzing classical music, especially Haydn, Mozart and early Beethoven.

In saying all this I am concerned, of course, with teaching method, where it is often desirable to start by abstracting the elements of music before dealing with music itself. Thus, apart from insisting on the usual study of harmony and counter-point, Blacher generally sets his pupils the task of writing melodies of thirty or forty bars in notes of equal duration, to teach them the use of linear climax, etc.; he also makes them write successions of chords, proceeding from consonance to ever-increasing dissonance, and passages of rhythm alone, in one and two parts, beginning

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with notes of long duration and finishing with the smallest units.   These exercises are intended to give fluency in the handling of the single elements of music when they are later used in combination, and they are naturally just a prelude to the writing of real music.   Similarly, in defining Blacher's attitude to harmony and rhythm, I mean that only when considering the elements of music in isolation from one another, is rhythm the one on which he lays most stress and harmony the one in which he has least interest.   His real pre-occupation is of course form— if one must use that term, for a piece of music is surely what it does and form, being a name for what it does, is merely another name for the piece itself.

Blacher always emphasizes this when analyzing music, always insists that it is superficial to abstract formal types; for one has only to look at the works of Haydn, Mozart and Beethoven to find that each movement in sonata or rondo form is quite different from any other.   And so Blacher maintains that the inspiration or idea on which a piece is founded is not a tune or rhythm, but rather the piece itself.

Of course it is useful to talk sometimes in terms of superficial generalities and there is little danger in it so long as one realizes that one is doing so.   Thus one can say that Blacher aims to teach his pupils to be able to use the methods of working to be found in early and middle period Beethoven.   They have to write three or four development sections to a single exposition; then a string quartet, because this is a medium in which it is very difficult to disguise structural deficiencies with instrumental effects.   Subsequently they are encouraged to write pieces of every variety, to experiment in medium, form and style.

This work is complemented by classes in orchestration and, above all, in analysis.   Herein lies perhaps Blacher's greatest worth as a teacher, but it is just at this point that it becomes less and less possible to describe what he does.   One can say that he will analyze a melody and show how much it depends on such purely melodic factors as interval and linear climax, or again on harmonic and tonal tension, or on the use of rhythm in syncopation and the setting up and breaking of sequence; how much a whole piece relies on harmony and tonality in its structure, or on the use of rhythmic asymmetry, as in the cutting of phrase-lengths in a Beethoven development section or the building even of eight- and sixteen-bar periods, in the works of Haydn and Mozart, out of unequal groups.   He will first take the methods of Beethoven, who is selected as providing the simplest standard way of working.   He will then show that these are not necessarily the best of all methods.   For example, the 19th century method (begun by Beethoven) of working primarily with crescendi, should not necessarily be followed, nor is it always desirable to work with the minimum of material, especially as the possibility of doing so depends in most cases on a strong tonality.

One must admit, however, that this is just a list of generalizations and, as I have said, the more deeply one considers a piece of music, the less valuable do generalizations become.   Therefore, without quoting individual analyses word for word, one can only say that Blacher's aim is to show the multiplicity and variety

of working methods and of musical material, discussing it from as many aspects as possible and trying to find on what the success of a particular piece depends.   And when the student has worked with him as far as this, he will be told to go off by himself and learn to be a composer, for that Blacher cannot teach him. All he can do is to help him to grasp as quickly as possible what past music was really about. Then, in so far as he is gifted, he must learn for himself how to write his own music. So perhaps I may be forgiven for complaining, at the beginning of this article, of the difficulty of describing Blacher's methods of teaching composition, for he maintains that he does not teach it at all.

SOME NOTES ON MARTIN PEERSON

Marylin Wailes

Martin Peerson was born between 1571 and 1573 at March in the Isle of Ely, and died in 1650. Thus his long life stretches from the time of the great English madrigalists to within eight years of the birth of Henry Purcell.

There is still a good deal of research to be done on the younger composers writing during the first half of the seventeenth century, so that a comparative evaluation of Martin Peerson and his immediate contemporaries is not yet possible. We know almost nothing, for instance, of the music of his two colleagues at St. Paul's Cathedral,[1] Adrian Batten and John Tomkins; and examples of the enormous output of the Ferrabosco family are rarely if ever heard. Nevertheless there can be no doubt that Peerson is a composer of outstanding importance.

He evidently wrote much music for the virginals,[2] though the four pieces by him in the *Fizwilliam Virginal Book* are the only ones to have come down to us. There does seem to be some hope, however, that most of his keyboard pieces may yet turn up.

Of Peerson's other works a great many have been preserved and are now being published. His church music consists of verse anthems (often in several sections and of considerable length) and English and Latin motets. His secular music includes ayres, dialogues, grave chamber music (secular songs which resemble verse anthems in structure) and some fine instrumental fantasies.

It is only to be expected that Italian influences should appear in his works, for between 1588 and 1616, his most receptive years, no less than eleven collections of Italian vocal music were published in this country, including the two volumes of madrigals entitled *Musica Transalpina*, compiled by Nicholas Yonge.

In Thomas Myriell's fine collection of English and Italian vocal music, called *Tristitiae Remedium* (1616), Peerson himself is well represented in company with such composers as Orlando Gibbons and Marenzio. It is here that we find ten of his best verse anthems and also the only extant transcription of his funeral ode to the unfortunate Lady Arabella Stuart.

[1] Peerson was 'sworn in' as Master of the Choristers of St. Paul's in 1626, and apparently held this post for the rest of his life.

[2] John Beaulieu writes to William Trumbull the Elder, in 1609: 'Herewith you shall receive the lessons on the virginals procured by Mrs. Bet. They are by one Martin Peerson, a skilful musician who for company sake lieth with his wife in the same house as Mrs. Crowther at Newington. He has composed many lessons on the virginals, which is his principal instrument, and inserted some in this book.'

Before considering the special characteristics of Peerson's style it is interesting to see what he thought about the music of his own period. Here is a poem he wrote in 1614 and which appeared in the preface to Thomas Ravenscroft's *A Briefe Discourse of the true (but neglected) use of Charact'ring the Degrees by their Perfection, Imperfection, and Diminution in Measurable Musicke, against the Common Practice and Custome of the Times . . .*

' In Approbation of this ensuing Discourse; and the Author therof my deare friend, Maister Thomas Ravenscroft.

> Arts are much alt'red from their Pristine State,
> Humors and Fancies so Predominate.
> Ould Artists though they were Plaine, yet were Sure,
> Their Praecepts and their Principles were Pure:
> But now a dayes We scarce retaine the Grounds,
> W'are so Extravagant beyond our Bounds.
> Among the Rest, Musicke (that noble Art)
> In this sad Eligie must beare a Part ;
> Whose Purity was such in times of yore,
> (When Theory the Practice went before)
> That then She was had in as great Esteeme
> As now of Her the Vulgar basely Deeme.
> Errors in Figures, Characters, and Note
> Doe Now cause many Teach, and Learne by rote.
> This my deare Friend doth seeke heere to amend ;
> Wherein he travail'd farre, great paines did spend
> To right his Mother ; he seekes to reduce
> Her to her Antient Grounds, and former Use,
> To beate downe Common Practice, that doth range
> Among the Commons, and her Praecepts change.
> Heere shall you finde true Judgement, store of reading,
> All for the Ould true Rules of Musicke pleading.
> Number of 3. among the Meane respected
> Are hence exil'd, and (worthily) rejected,
> As being crept in by Custome, and Use
> Among the Vulgars, which the Wise refuse.
> Much might be said more of this Little Booke:
> But let the Reader judge that on't shall looke.
> This of the Author onely I will say,
> That in One poynt to no man he gives way ;
> Composing of a Song unto some Ditty
> He is so Judicious and so Witty,
> That Waighing first the Nature of each Word
> He finds fit Notes, that thereunto accord,
> Making both Sound and Sense well to agree ;
> Witnesse his sundry Songs of Harmonie.
> What shall I say more? this Worke I approve,
> And for his Skill, and Paines the Author love
>
> MARTIN PEERSON, Bachelar of Musicke.'

At this time hardly anyone did more than Peerson to alter the art of music, for although his roots were firmly planted in the past he was always reaching out towards the future; indeed, he anticipated many of the Baroque techniques. There is a descriptive quality in his music that is new; a quality very apparent in his well-known virginal piece, *The Falle of the Leafe*, and also in the chorus of one of his ayres called *Hey, the Horne*, where the voices imitate horns.

How well Peerson himself could fit his music to the words is shown by the following example from one of his most dramatic verse anthems, *O Goe Not from Me*, for five voices and instruments. Here, as in some of his other verse anthems, he indicates clearly when the voices should be silent and the instruments continue solo; and from the briefness of many of these solos it would seem that the voices were doubled by the instruments throughout the whole work.

Peerson's *Ayres and Dialogues*, published in 1620, are for one or more solo voices accompanied by viols or virginals. Each of them ends with a short chorus, except the madrigal, *See, Ah See*, written in 1604 for Ben Jonson's *Penates*.

In his *Mottects or Grave Chamber Music*, published in 1630, Peerson uses a figured bass. The following illustrations come from *Love, Beauty and Time*—

a love song in three parts. *Love* and *Beauty* are each for five voices with an accompaniment on the organ, but in *Time*, [stringed] instruments are also included.

Peerson seems to have been the first Englishman to figure his basses. The figures he uses in organ parts are 7, 6, 65, 64, 5, 4, and 3. The organist is given a treble and bass skeleton, not bass only; but never in Peerson do you find that

the inner parts lose character because of the use of a figured bass. The individual
lines are all of equal interest.

As an example of Peerson's striking chord progressions, here is a passage
from the anthem *Who will rise up,* included in Thomas Myriell's *Tristitiae
Remedium* of 1616.

There are MSS. of six 6-part fantasies and seven 6-part almaynes at the British
Museum and in Christ Church Library, Oxford. The two fantasies at the British
Museum are each followed by an almayne, but the four at Oxford stand alone
and are called *Acquaintance, Beauty, Chouce,* and *Delicate.* They were probably
written for viols, but as usual at this period no instrumentation is given.   All
of them are mature works, rich in content, beautifully designed, and daring in their
harmonies.   My final example is from *Delicate* (see opposite page).

It is hoped that these short extracts will show something of the individual
beauty of Martin Peerson's music, which was held in such high esteem during his
lifetime and is well worth reviving now.

REFLECTIONS ON 'THE RAKE'S PROGRESS'

Robert Craft

Most of the criticism which has grown up around the *Rake's Progress* points out as an important feature of the score certain obvious resemblances between it and other operas. It will be the purpose of this random investigation, however, to show that in using old operatic devices and clichés Stravinsky has in fact created fresh and vital music. If one begins with the music and not with one's own ideas, this will appear clearly enough.

The opera is designed as a succession of simple aria forms, duets, trios, etc., linked to each other directly or by recitatives. The three-act division of the libretto presented the composer with the classical formula of exposition-dénouement-catastrophe—and/or redemption. But instead of trying to find musical forms 'expressive' of this dramatic logic—in the style of Alban Berg who would eventually have arrived at treating opera as a large sonata form—Stravinsky depends upon the dramatic arrangement and juxtaposition of his separate 'numbers' and their total dramatic unity. In this the crucial factor is the plan of harmonic movement.

One of Stravinsky's most effective structural devices is the aria-reprise. He uses it to unify a single scene, as in the case of the first brothel chorus in Act I, Scene 2 ; and still more important in this respect are the several reprises which occur between the different acts. Just before the finale of the first act Anne prays for Tom and later, just before the finale of the second act, Tom prays that he might deserve Anne. The same music is used for both prayers, and the connexion, which strikes the listener immediately, recapitulates for him what has happened in between. Similarly Baba's aria in the second act is repeated almost exactly in the third act, with the same dramatic effect. But the most comprehensive formal link accomplished by this means occurs in the graveyard scene, where in the climax of the opera Tom defeats Shadow and saves his own life by winning at cards. He is aided by the goddess of love, represented by Anne's voice heard offstage singing the melody of her aria from Act II. The listener is startled by the familiarity of her song, and if he does not immediately identify it, its significance is none the less clear to him. Then, in reply to Anne's voice, Tom sings a transformation of her first act *Cabaletta* melody. As if Stravinsky were determined to draw the whole opera together in this one splendid moment, the graveyard scene finishes with two more reprises: Shadow in his descent to Hell sings a piece with an amazing reference to his second act aria : 'That man, that man alone ' ; and finally the music for

the end of the scene is built entirely on the Ballad tune used in the auction and when Shadow mocks Tom in the graveyard. It must be emphasized that all these reprises are obvious to the listener on first hearing, and that they are in no sense intended for the eye like many of the highly ingenious constructions in the operas of Alban Berg.

Song is both subject and substance of the *Rake's Progress*. The individual songs vary very little in pattern. That of the longer type, an ABA song form, calls for a first part of one tempo, a middle part of a faster tempo, and a third part which returns to.or modifies the first. Two examples of this kind occur in the first scene of the second act, in the arias of Tom and Shadow. Then there is the shorter and simpler aria form which is confined to one tempo and is divided into two parts by a short orchestral interlude. The second part of this type of aria is really little more than a modification of the first part, a kind of second verse, but with a coda or special ending—as in Tom's brothel *Cavatina* and Anne's 'Quietly, night'.

Apart from the Epilogue there are few extended ensembles, and all of them as well as the choruses are variants of these same two aria patterns. For example, the opening ensemble of the opera may be construed as deriving from the second type of simple aria. It is a trio, or rather, a duet in which the third voice is only used to underline the modulatory middle section. In fact, this section separates the first and second parts of the duet much as an orchestral interlude separates the first and second parts of a solo aria. All the ensembles are *scenas* in which the action is considerably developed, as, for example, in the quartet in the first scene and the duet and stretto-finale in the auction scene. Both these scenes are made up of smaller formal sections but they are put together in such a way that we experience each scene as a complete unity.

Let us examine a typical *Rake's Progress* aria: the duet, 'In a foolish dream', sung by Tom and Anne in the Bedlam scene. To begin with, the plan is elegantly simple. Like almost every other *Rake* aria, it has an orchestral introduction. This is followed by a sixteen-bar section for Tom alone, a nine-bar section for Anne, and another section in which Tom repeats the last four bars of his first section. Then, and only then, the two voices sing together in a kind of coda. The harmonic structure is also simple, deceptively so, for subtleties lurk everywhere. As more than half of the piece is built over a B flat pedal, and the coda is entirely in B flat, Stravinsky has had to manœuvre some striking harmonic changes around B flat in order to avoid monotony. He has done this in the first place by creating a kind of harmonic ambiguity, and in the second by moving the harmonic pull up to D flat in the middle section for Anne's entrance, a D flat he supports by a very discreet use of A flat. He also achieves several remarkable harmonic shifts from the B flat pedal to A flat, and at one place the third of the dominant of G minor is derived strikingly from a chord which seems as though it might turn into a G flat but becomes a diminished chord instead. Again in the introduction, the bass and the accompanying figure above both affirm an unmistakable B flat major, but the melody

in the oboe is as unmistakably G minor. However, because of the persistent B flat
bass and because in the two beats when the oboe is silent major thirds remain firm,
the oboe does not succeed in turning the whole phrase into the minor.   Such
harmonic ambiguities are typical of Stravinsky.

The melodic design of the duet is also very simple. The diatonic movement
from B flat to E flat, which is a basic melodic idea, is derived from the coda, which
will be recognized as the Ballad tune with embellishments. All the rhythmic ideas
have likewise grown from this Ballad tune, and the first phrase of the melody is one
of the Ballad tune phrases (ninth bar from the end) turned back to front. The
melodic structure is also remarkable for its contrast of seconds and fourths, the use
of the latter interval in this way being rare in Stravinsky.

(To say that the vocal style of this aria and of the opera in general is Italianate
is misleading. Of course, the characteristics of Italian vocal style of a certain period
are to be found in it, but the indulgences and vocal acrobatics also characteristic
of the same period are entirely absent. It is always lyrical, avoiding the dramatic
style of late Verdi even when the libretto might seem to call for it. It is usually
simple but may take on embellishment as in Tom's last Bedlam recitative which
indeed reminds one more of Renaissance song than of 18th century opera.)

The instrumentation (strings, flute, oboes, joined in the coda by a clarinet) is
lucid, but nevertheless *accompagnando* in style, not independent. The oboe and
flute develop the melodic subject of the vocal part in a nearly related form, and they
persist to the end as a dialogue *obbligato*.

The theatrical function of the recitative is to fill in the plot. Its musical
function is to afford harmonic relief and prepare for new keys. Most *Rake*
recitatives begin with first inversion chords and move through simple harmonies
which also emphasize the first inversion. The vocal parts stick closely to chordal
outlines and often intone several syllables on the same note. A keyboard instru-
ment is used. However, all this applies equally to Mozartian recitatives and is
merely the background on which Stravinsky has traced his own inventions.

Let us take as a typical recitative the first one in the second act, where Shadow
finds Tom alone, confronts him with a likeness of Baba the Turk and suggests that
he should marry her. Shadow's entrance is accompanied by a rapid figure on the
harpsichord, a figure used to summon him in response to Tom's ' wishes ' in earlier
and later scenes. After this flourish, Shadow asks ' Master, are you alone? ' and
Tom answers him ' And sick at heart ', imitating his manner. But what a simple
and masterly stroke is accomplished here!   The same notes are used for Tom's
answer as for Shadow's question, and in the same rhythm, but twice as slowly ; and
the ambiguous harmony underlying Shadow's question is resolved in Tom's sad
answer by a very moving C sharp minor 6-chord. Then when Shadow confronts
him with the broadsheet portrait of Baba the Turk the harmony jumps to an abrupt
D major 6-chord as he recognizes her, and this resolves on to a seventh in the last

inversion (four-two chord) with the bass descending a semitone, a graceful and natural ending. Then under the words 'swooned after a mere glimpse of her' a simple E flat chord in root position is a fresh surprise. Indeed, probably the most remarkable achievement of the *Rake* is the way in which it invests simple harmonies with freshness, and though we have examined only eight bars of one recitative it is sufficient to prove our point that the question is not whether a composer has used an old pattern, but what he has created with it.

The orchestra never contests the singers' supremacy and is never heard alone for long except at the beginning or end of a scene. Moreover, it is used in a chamber-concertante style, with only a very few *fortissimo* passages for full orchestra—the finale of Act II, Scene 2 is the one outstanding example. The only orchestral pieces that one could play as 'excerpts' are the fanfare Prelude and a few other preludes and introductions. It is interesting to compare these preludes and change-of-scene pieces with the interludes of *Wozzeck*. When the curtain closes for a scene change in *Wozzeck* the orchestra generally rises to a new volume level, in fact it takes the drama away from the stage and into the audience. In the *Rake's Progress*, however, the interludes are quiet little pieces which usually employ independent material. The prelude to the graveyard scene is scored for a solo string quartet ; the introduction to Act I, Scene 1 uses only a quartet of woodwinds, and the introduction to Act I, Scene 3 and the coda to Act III, Scene 2 are both woodwind trios.

Nevertheless, in spite of its modest size, its chamber music style, and its accompanying rôle, the orchestra shares an exquisite balance with the stage in its demand on the listener's attention. The orchestral writing is so full of invention and so rich in detail that one can always detect new subtleties in it. Perhaps one of its peculiarities should be mentioned : it is without trombones and tuba and so the low range of brass is missing except for the low notes of trumpets and horns. Needless to say this has lightened the texture, but it has also led Stravinsky to exploit the low register of the trumpet in a remarkable fashion, of which the reprise of the brothel chorus is perhaps the most striking example.

One might call attention to all kinds of orchestral invention : the *obbligato* arias, one with 'cello and one with bassoon, the quartet of viola, bassoon and two oboes in Bedlam, and the solo harpsichord suite in the graveyard, for instance ; but since examples abound on every other page the list would be too long.

Stravinsky is a 'music first' composer—it sounds paradoxical but some composers have given first place to the text—which means that for him words must serve the musical use he finds for them, whether or not this use violates the common practice with regard to stresses, syllable groupings, metrics, etc. Stravinsky himself has said that differences of language do not change his principles in the matter. He has shifted accents in Russian as well as in English and French settings, and suffered the same misunderstanding from critics who were looking for more ordinary treatment. However, when one looks at the settings of English verse during the 150-year

period ending with Purcell one wonders if it is possible to do anything with English that would sound really odd by comparison.

The *Rake's Progress* is very much more full of natural than of shifted stresses, but what is amazing is the amount of invention Stravinsky's feeling for English rhythms and sounds brings forth.

What the singer has to do is to study the whole structure of the music and not try to phrase from the words alone. For example, in the very first line, ' The woods are green '. ' The ' occurs on a downbeat but the feeling is upbeat, as the singer will find out when the orchestra enters under the word ' woods '.

Opera did not arise from a purely musical need. Of the Florentine amateurs who created it not one was primarily a composer: Caccini and Peri were singers, and Cavalieri, Bardi, and Vincenzo Galilei were merely very gifted dilettantes. Had it not been for Monteverdi who was forty years old and a master of polyphonic music before he wrote his first opera, the taint of amateurism might have condemned the operatic experiment to an ephemeral career. The fact is, of course, that Monteverdi and countless ' pure ' musicians after him did write operas.

To the ' pure ' musician opera is ambiguous. It begins in the libretto. No matter what reforms the musician makes, no matter how absolute his control, his position will always be ambiguous. Composers have divided sharply in their attitude towards this ambiguity. The one kind—let us over-simplify and call him the musical dramatist—has rebelled against the ambiguity, tried to reform or deny it. The other kind of composer has accepted all of opera's ambiguities, and even built upon them ; he has not been very concerned to reform opera nor has he deplored its obvious absurdities. There is no more perfect example of this second kind of composer than Stravinsky.

These two divergent tendencies or traditions are as apparent in the earliest operas as they are to-day. It is therefore improper to speak of evolution from one to the other ; a double tradition has always existed. Some composers have pursued both traditions ; Verdi for example, or Schönberg who wrote music dramas as a young man and later in life two real operas, one of which, *Von Heute auf Morgen,* is as pure as *Così fan Tutte,* and quite as *bel canto* in style (Schönberg who was capable of a much greater evolution than Berg reacted in *Von Heute auf Morgen* against the use in *Wozzeck* of symphonic forms, protesting that ' opera has its own forms '. Performances of *Von Heute auf Morgen* and *Moses and Aaron,* Schönberg's other opera, are long overdue in this country ; with the *Rake* and the two operas of Berg, they are the most absorbing theatrical works created in our century). In certain rare examples both traditions cross. There is also the unique instance of *Don Giovanni* which, as Kierkegaard pointed out, overcomes the ambiguity because its subject is music in an absolute sense.

The musical dramatist is always a reformer. He pleads for a more ' natural ' vocal style which means, variously, inflected speech, the declamation of Debussy, or recitation and *Sprechstimme*, etc. He is eternally searching for a form which will

more directly 'express' the drama and unify it (Wagner's writings on opera reform are obsessed with the notion of 'unification'). He is also addicted to ideas which however deeply related to music are of no consequence whatever in purely musical practice (in the case of *Tristan*, for example, there is a far greater concern with the dialectics of the situation than with dramatic craftsmanship; the only possible explanation of the long King Mark scene *after* the love scene is that Wagner actually expected the audience to be so interested in the dialectics that it would not care about the dramatic impossibility of it).

In his search for the unifying form the musical dramatist is sometimes led to apply strict instrumental forms. He uses and develops motives (*Falstaff*), essentially a non-operatic idea. In an extreme example (*Lulu*) he will even identify the development of a character with an elaborate sonata development. He is inclined to polyphonic forms (*Falstaff*, *Wozzeck*, and even *Tristan*, for though Wagner never used a strict contrapuntal form he was capable of such good part-writing that we may call it polyphonic). The tendency towards polyphony is also foreign to 'pure' opera: when in about 1600 the original opera amateurs proposed a new kind of singing they envisaged a principal sung melody and an accompaniment. The idea of accompaniment is, of course, incompatible with that of polyphony. The purely harmonic idea is therefore the one most natural to opera, if this is to be what the pure opera composers claim. Monteverdi himself kept polyphony alive in his choruses. The musical dramatist in his refusal to accept the idea of accompaniment is apt to go so far in the other direction that he places the centre of interest in the orchestra.

Opera and music drama treat the text in basically different ways. Let us take *Wozzeck* as an example of the 'perfect' music drama and compare it to the *Rake's Progress* our 'perfect' opera. The *Wozzeck* libretto is prose, the *Rake* verse. Berg's treatment of his text is entirely naturalistic. He is interested only in underlining the significance of what is being said. Consequently the vocal lines resemble cardiograms: they go up or down, grow louder or softer according to the 'meaning' and 'expression' of the text. Strict naturalism makes ensembles difficult to handle, for ensembles are unreal situations. Berg, however, found an ingenious solution: he saw that if each voice in an ensemble has its own words and is contrapuntally independent, the ensemble is not unrealistic. For example, in the second act street scene he brings three voices together by giving each one the individual part of a fugue. Naturalism also forbids a character to sing an aria unless a song is actually called for in the context (Marie's lullaby). Similarly, when the text includes the reading of the Bible, the singer actually reads in a speaking voice.

To the musical dramatist the prosecution of the drama is everything. An aria, from his point of view, is an obstruction. Ideally he identifies the music and the drama, or, as Machado di Assis said of Wagner, 'his music goes with his text as if they had been created together'. What is of interest to musicians in *Wozzeck* is its geometry, its contrapuntal plan, its structure; but it was the composer's intention —and he was successful in realizing it—that we should absorb ourselves above all in the drama, and pay attention only secondarily to the musical structure.

It is very different with pure opera and the *Rake's Progress*. The basis of this
kind of opera is the aria. The whole idea of the *Rake* is to tell or enact a story
in song. When the characters are not singing—which is very rare—they are
speaking, not naturalistically, but in a highly stylized and conventional way:
in recitative.

The formal task of the pure opera composer is to arrange his songs in an
organic manner. One of the most perfect examples of such an arrangement is the
device of the finale, in which one number follows another with almost imperceptible
connexion (the difference between this procedure and Wagnerian ' unity ' is that
in Wagner the form of the numbers has been dissolved into what seems like mere
improvisation). Mozart in *Don Giovanni* was in the process of extending his finales
so far backwards, so to speak, that they include a good third of each act. The first
act of the *Rake's Progress* contains a remarkable example of the finale procedure.
From the ' Lanterloo ' chorus in Scene 2 until the end of the act there is a con-
tinuity which a curtain and change of scene, an orchestral recitative and several
changes of tonality cannot destroy. But ' Lanterloo ' has several functions besides
pivoting the act into a finale. First of all, it is a serenade, a piece of pure ' night
music '. Secondly, it takes us from a crowded to an empty stage. Thirdly, the act
has been Rakewell's until ' Lanterloo ', and afterwards it will be Anne's. Above
all, however, the audience is aware by the end of this piece that Rakewell's Nick
Shadow is the Shadow of Death. The whole character of the opera changes in this
one brief number. Of course, the words inform us, but the words would have been
useless unless the music told us as well. In fact, according to the text we should
have been more alarmed about Shadow before. However, the musical timing came
later. The result is one of the most amazing transition pieces ever written. It
begins as a bawdy dance. Somewhere in the middle of it, the same music becomes
inexpressibly touching. Then the music of the woodwinds quietens down, except
for one last warbling clarinet ; and finally the whole wind body is absorbed by
string chords.

The composer of pure operas understands and accepts the ambiguity of opera
as the basic condition of its existence. He inherits its clichés and formulas and
thrives on its limitations. Least of all is he concerned with the creation of credible
situations (Shadow's ' asides ' to the audience would be ' incredible ' to a musical
dramatist). Fantasy is an important element (the fact that Baba—muffled by her
husband's wig and seated motionless in an armchair for several months—should
be auctioned off as an ' unknown object ', is a delightful fantasy). Pure opera
characters are more readily recognized as types than are the characters of musical
dramas, though certainly the characters of *Wozzeck* are at once individuals and
types, and at the same time they are even more alive as symbols than as people.
The *Rake* characters are primarily operatic types, but they are also vocal types.

The existence of the *Rake's Progress* to-day, that is, the existence of a grand
opera—for it is a grand opera in spite of its chamber style—so perfectly rooted in
the pure operatic tradition, is little less than a miracle. It is a chief argument for
a renaissance of opera.

BACH AND THE MIDDLE AGES

Heinrich Besseler

When Bach was rediscovered at the beginning of the 19th century, he was described as the 'Albrecht Dürer of music'. People were aware of his connexion with a remote past, and felt instinctively that the craftsmanship of his music and the strength of his religious faith were 'medieval'. The 19th century admired Bach because he was independent of his time. In Nietzsche's opinion Bach stood on the threshold of modern music, but at the same time looked back towards the Middle Ages. Thus he emerged more and more as the opposite pole to the rationalism of the 18th century, as the mysterious Gothic artist whose influence by some miracle extends as far as our time, but who represents a world of a totally different order. In 1908 Albert Schweitzer wrote: 'Bach is an end—everything merely leads up to him, nothing proceeds from him'; and more recent scholarship has tended to endorse this view.

During the last few decades, the Gothic period has become much more familiar to us. We know the chief figures, such as Pérotin, cantor of Notre Dame in Paris, and Franco of Cologne, Philippe de Vitry and Guillaume de Machaut, Francesco Landini and the *trecento* masters, Dunstable, Dufay and Ockeghem. The general development can be surveyed with some certainty, even occasionally in great detail. Indeed this accumulation of knowledge compels us to re-examine the relation between Bach and the Middle Ages even though this may involve an element of risk.

One thing that Bach shares *par excellence* with his predecessors is the fact that his music is centred in religion. It would be a mistake however to think that the Middle Ages represented an undifferentiated unity in this respect. The worldliness of the 14th century is well known to us, as well as other trends of thought, such as the appearance of a rationalistic attitude and even the sympathy shown to the non-Christian philosophies of Islam and antiquity. The situation changes constantly. An age of intense faith and great creative ability will be followed by an age of artistic decadence and inflexible dogmatism. To which periods of medieval music can we really compare Bach? That is to say, which characteristics of his music are so remote both to the 19th century and ourselves that only the Middle Ages will explain them?

The pre-eminence of Church music alone is nothing to go by; for we know of composers who wrote mainly Church music in the 17th and 18th centuries

as well as later.   But in Bach's case we find a peculiar trait, which has long been
observed and never satisfactorily explained.   It is that free interchange of the
profane and the religious, made possible by the fact that the musical idiom is
the same in both spheres.   The evidence of this lies in the process of *parody*,
by which a secular work can be transformed into a sacred one merely by altering
the text.   This may involve some change in the technique of composition but not
necessarily so.   In theory, to provide a new text is enough in itself to convert
a profane work into Church music.   The opposite process, too, the deriving of a
secular composition from a sacred one, would be conceivable, although no instance
has yet been proved in the works of Bach.   In the Middle Ages, however, the
transformation of a sacred work into a secular one by means of parody does occur.
So we should not exclude the idea from the outset as questionable, although it
seems hard to understand.

But individual problems do not concern us here.   The only important thing
is the principle of the procedure: the interchange of sacred and profane music
thanks to a complete identity of technique in both fields.   It is this that is
stimulating and, to the 19th and 20th centuries, obscure in Bach's practice.   Neither
Beethoven nor Bruckner, neither Liszt nor Mendelssohn nor their successors would
have been able to do the same.   Concerto, opera and chamber-music belonged
to separate worlds, and Church music stood out in contrast through its different
character or at least through its determination to achieve a ' sacred style '.   The
two different spheres were kept quite separate.   To pass over from one to the
other simply by altering a text would have been considered tasteless and lacking
in any sense of style.   But it was done in Bach's time; and it could be done because
the period possessed a ' common all-inclusive style '.   Here obviously lies the
key to the understanding of parody.   We must therefore examine the music of
the Middle Ages with regard to this critical point.

A survey of the periods of early polyphonic music shows us that a *common,
all-inclusive style* with the use of parody is very rare.   It only happens exceptionally
in the Middle Ages, but then in a surprisingly clear form.   An example of parody,
whose scope and originality long since aroused the interest of scholars, occurs
in the Gothic period, in fact during the 13th century.   At that time Pérotin,
composing within the framework of the liturgy, had developed organum to the
highest level of polyphonic art.   From this main *genre* sprang the so-called
Motets, which were to have so much importance in the future.   Originating within
the Church as a Latin and sacred form of music, they soon acquire a French and
secular counterpart, and these two branches interweave through the process of
parody, and fertilize and enhance each other.   The art of the Motet in the Notre
Dame period is therefore based on a common style embracing sacred and secular
music alike.   The individual work is usually short and song-like in character.   But
we are concerned here with intention rather than size.   The significant fact in
any case is the appearance of a common style with the use of parody in the Motets
of Notre Dame from about 1200 to 1230.

Here indeed we have a true parallel to Bach's technique in which even the disputed parody from sacred to secular often occurs. But we have to wait a long time to find another parallel of such striking clarity—in fact more than two hundred years, as long a period as that which separates us ourselves from Bach! It is only in the 15th century that we discover examples which admit of a comparison. The idea of ' parody ' in polyphonic music was originally used to describe a method employed in the composition of the Netherlands Mass. Up to the time of Lassus a secular work very often served as a source, so that the Mass cycle in question took over the entire thematic content of a Madrigal or a Chanson. This use of parody had its origin in the first half of the 15th century. Nicolaus Zacharie, who entered the Papal Chapel in 1420, was already writing similar settings of the Ordinary of the Mass, as Federico Ghisi pointed out a few years ago at the *Congresso Internazionale di Musica Sacra* in Rome. This brings us right up to the time of Dufay. He spent his early years in Italy, became a member of the Papal Chapel in 1428 and during those years laid the foundations of the new Mass in a series of epoch-making works.

Quite the most striking characteristic of Dufay's music of about 1430 is the unity of his melodic idiom in compositions of every variety. The same ornamental patterns, the same thematic material, the same rhythms appear in both the sacred and the secular fields. It is by no means rare for a Chanson to reappear in other works with a sacred text. In writing Masses musicians made use of folksongs, which appeared in actual quotation or as a *cantus firmus* in the tenor; and they very soon appropriated three-part song-settings which were treated in accordance with the technique of parody. Although so far there is no authenticated example of such a cycle by Dufay himself, the foundations of the Early Netherlands Chanson Mass were laid by him. This time the method endured as a tradition throughout the whole of the 15th and 16th centuries, whereas the previous common style of the Notre Dame period had quickly disintegrated as a result of changing circumstances. Thus the important thing is the formation of a new common style, which at this point once more embraces the writing of sacred and secular music. It appears in the work of Dufay around 1430. Its immediate consequence was the technique of the Early Netherlands Chanson Mass.

The Motets of Notre Dame and the Early Netherlands Chanson Mass thus represent a common style, which in both cases is founded on the identity of the sacred and the secular melodic idiom. Profane music made the larger contribution to this. The music of Notre Dame derives its character from the dance-song; it has the same symmetrical melodic grouping and a swinging 6/8 or 3/4 rhythm like a round dance. The combining of Gregorian Chant and dance-music in Pérotin's organum is unforgettable for anyone who has once laid himself open to the impression of this monumental art. Admittedly the dance element grows less strong in the 15th century, since at that time it played only an unimportant part in the secular song. But Dufay's song-like melody springs just as clearly from a new naturalness and optimism, which appear also as a surprising undertone to his Church music. A similar profane influence, namely that of opera,

has often been observed and censured in Bach's music. An authority on Palestrina like Carl von Winterfeld finds the dramatic element in Bach worldly and out of place. Though we may disagree with this judgment it is based on accurate observation. If we compare the art of Bach with that of the 17th century, then what strikes us as particularly new is its exciting intensity. The impression it gives of including the whole of life reminds us of Dufay's universality in the 15th century, or, two hundred years earlier, Pérotin's combining of polyphony and the dance.

Thus although these three epochs are so far apart they do to a certain extent resemble one another. In all three we find a common style with the use of parody, and in each instance the new musical idiom owes its convincing power to the secular element: dance in Pérotin, secular song in Dufay, instrumental music and opera in Bach. But they have yet another feature in common. What has always been felt as characteristic of the Bach period is that quality which a Frenchman recently tried to define as ' style d'une teneur '. What he meant, as applied to the generation of Rameau, Bach and Handel, was the uniform progression of their music. Each movement limits itself to one key, one rhythm, one ' affection ' and often to a single theme. This gives the music a peculiar smoothness and inner serenity. It develops as it were of itself. Oddly enough we have as yet no term to describe this well-known phenomenon. It could be paraphrased by the expression used just now—*uniform progression*. Here we have in fact one of the chief resources of the Bach period which he himself used with the utmost boldness. and consistency.

A technique of this kind was not unknown to the music of the Middle Ages, but it appears only in the two epochs that we have already considered: in the Notre Dame period and in the 15th century. We have long known about the so-called modal rhythm, mentioned by 13th-century theorists. The earliest theorists of the Notre Dame period describe six modes as being in customary use. These form the various basic rhythms of the Motets. Since a mode, once chosen, was used consistently throughout a work, we find in the music from about 1200 to 1230 a ' uniform progression ' of a completely classical kind. In the 15th century, beauty of sound became the basis of music rather than rhythm. Shortly before 1430 Dufay, stimulated by English music, introduced the so-called *fauxbourdon,* in which, by doubling the upper voice a fourth below, there arose a succession of chords of the sixth, with a combination of the fifth and octave at the beginning and end of each section. Such an extraordinary technique can only be understood as an embodiment of that uniform progression which the age evidently demanded. This would account for the overwhelming success of *fauxbourdon* from about 1430 to 1450. At that time the whole of polyphony became permeated with *fauxbourdon* harmony, so that Dufay's treatment revolutionized the technique of composition. The outcome was the new music of the Netherlands, with its ' euphonious counterpoint '.[1]

[1]See H. Besseler, *Bourdon and Fauxbourdon, Studien zum Ursprung der niederländischen Musik,* Breitkopf & Härtel, 1950.

The strong current of Dufay's polyphony in his mature four-part compositions is among the most impressive things in the history of music. Although essentially vocal music demanding choral quality, it reminds one irresistibly of Bach's concentrated counterpoint. What makes such a sublime effect in both cases is the impression we have of music which unfolds without any human intervention. The uniform progression, still schematic in *fauxbourdon,* becomes in Bach a guiding formal principle. This was already to some extent the case in the Notre Dame period, two centuries before Dufay. The music of that time also makes the impression of inexhaustible richness, particularly in the powerful three- and four-part organa of Pérotin. The chief difference is that in the Gothic age rhythm was the dominating force, while with Dufay a freely unfolding texture has taken its place. Bach's music seems once again to have a rhythmic basis. But however irresistible the rhythm may be, it is still only one of many resources used to express the ' affection ' which henceforth governs every composition. Thus a comparison of the three epochs shows very clearly what it is they have in common and the particular form in which it appears. In Pérotin it is the rhythm which creates the uniform progression, in Dufay a freely unfolding texture, in Bach the working out of an ' affection '.

Thus the music of the Middle Ages provides parallels which throw a new light on what appears obscure in Bach. What was incomprehensible to the 19th century and is still a vexed question—the use of parody—was an accepted practice in the 13th and 15th centuries, because there existed then a common style. What we admire above all in Bach's music, its sublimely inevitable unfolding, existed in similar form in the works of Dufay and Pérotin. But we find in the Middle Ages not only isolated figures who can be compared with Bach, but also historical affinities, which become all the more clear to us because of the centuries which have passed. We can see the limits and the sequence of the individual periods. It is clear to us which things intrinsically belong together, and where new forces direct the development along fresh channels. Since we have so excellent a perspective, the question arises, what position does each of the two composers we have been discussing occupy in the context of his age? As the music of Pérotin and Dufay resembles that of Bach in certain fundamental aspects, this is a matter of some importance to us.

The Paris school of the 13th century thought of themselves as the heirs of Pérotin. Everyone knew his name, referred to him as ' the great ' and knew precisely what he had done for Notre Dame. To-day numerous musical manuscripts bear witness that Pérotin did in fact inaugurate what we call the Gothic period. He laid the foundations for the structure of individual and audacious polyphony that was built up during the two succeeding centuries. Remarkably enough, Dufay seems to occupy an exactly similar position in the later period. When in about 1830 the music of the Netherlands school was rediscovered, he was from the very first regarded as its founder. In Raphael Georg Kiesewetter's *History of Music,* the 15th century opens with a ' Dufay epoch ', which soon became known under the name of the ' First Netherlands School '. Since then new discoveries have

changed the general picture radically, but even to-day we have to admit that the crucial point was recognized: Netherlands music begins with Dufay. He was the pioneer and founder, whose work was developed by many generations. As the music of the Gothic period begins with Pérotin, so that of the Netherlands school begins with Dufay.

This brings us to consider the nature of an inaugural stage in history. What we observe in the Notre Dame period and later in the 15th century is clearly an *inaugural moment* of a unique character. It is a time of great renewal, of funda-mental reconstruction. Life and art are given a new aim. We could use the Greek word ἀϱχη, if the idea of an 'archaic stage' did not imply an art that is strict, abstract and in a certain sense removed from ordinary life. Exactly the opposite is true of our 'inaugural moment': it represents a tremendous increase in vitality and directness; it is a time of unlimited plenty, when all forces are marshalled for the conquest of a new world. What controls these energies however and gives them direction, is a belief. Under its rule all things are arranged and graded. This boundless vitality adapts itself to the demands of a well-ordered whole. It is the point at which the concept of the *Ordo,* handed down from the Middle Ages, comes to have a meaning also for music. As a well-ordered artistic world, modelled on reality, it now possesses a 'common style' which penetrates all spheres of existence, and a 'uniform progression' which rounds off every work into a symbol of the whole 'order'.

The Notre Dame period undoubtedly marked a new beginning. It was then that the melodic idiom and polyphonic technique were formulated that served as the foundation of music from the 13th to the 14th century. The same is clearly true also of the Netherlands period, whose vocal-polyphonic melody and euphonious counterpoint originate in Dufay. In both cases the period opens with the work of a great master, who indicates the way with music that is remarkable for its inclusive style and for the inevitable way in which it unfolds. It is just these two rare characteristics that we find again in Bach. One cannot avoid asking if his situation was in any way similar. Did Bach also belong to an inaugural moment? Is he perhaps the founder of modern German music in precisely the same sense as Dufay was the founder of the Netherlands period and Pérotin of the Gothic?

This is no doubt an unconventional view of Bach, very different from our usual attitude. For we tend to attach Bach as a 'Baroque composer' just as firmly to the past as the 19th century did in thinking of him as the 'mysterious Gothic artist'. He remains a final summit—an end, not a beginning. But has the usual interpretation been deduced from the facts alone? And are these facts compelling, or does prejudice raise its voice in the matter? At all events, a weighty argument against thinking of Bach as an artist who turned only towards the past is the vitality of his music. How can music which is so close to us be the work of a composer who only looks backwards? How in any case can we conceive of a creative artist working against the tendencies around him, apparently relying on his own isolated world of fantasy?

But we shall make no progress simply by setting one view against another. It is a case for positive demonstration. There must be elements in Bach's music, which either point to the future or have actually influenced later composers. Now Pérotin's work at Notre Dame and Dufay's polyphony in the Early Netherlands period show us the true nature of a time of inauguration. It is important to establish that it is by no means only a matter of looking to the future, of abandoning every heritage in a revolutionary fashion in order to promote solely what is new. Rather we find that an essential characteristic in both cases is the *synthesis of old and new*. The artistic eminence of Pérotin and Dufay is founded upon a great tradition which they are the last to draw upon. What they inherit, however, is transformed by fundamental innovations, which strike a completely different course. The rising generation, their immediate successors, cling solely to these innovations, with the result that, in their hands, the wealth of tradition perceptibly dwindles away. Soon it is the new element alone which determines the future and is developed further along the same lines. The dynamics of a change of epoch, here described, can be observed in precisely the same form in the 13th century and later at the time of Dufay. In both cases the decisive factor was a synthesis of old and new associated with a change of attitude. We find wealth of tradition and unique artistic stature once more, in a heightened form, in Bach; but are the fundamental innovations which characterize the beginning of a new period also to be found in his work?

Once again we must thank our observation of the Middle Ages for suggesting how we should conceive of such innovations. What is new does not appear as a ready-made system, every aspect of which has been weighed and approved. It comes without anyone noticing it, as though spontaneously improvised, is then transformed and established, and extends its influence on subsequent history. This is how we are to think of the evolution of the Motet, which developed out of the Notre Dame organum in about 1200. It cannot even be proved that Pérotin was its creator, although it is highly probable. We are better informed about Dufay's creation of *fauxbourdon* through which in about 1430 he enriched the sound of continental polyphony. In both cases the new element occupied first of all only a small place in the realm of traditional procedure. But this new element took root, became increasingly popular and finally replaced the old techniques or permeated them completely. Thus whatever innovations there may be in Bach's work, we shall not expect to find them at the very centre of his masterpieces based on established tradition, but rather on the circumference. They will first appear as procedures which play only a subordinate part in the work as a whole, but which point to the future.

Here I should like to refer to two contemporary publications and to quote their conclusions. The *Thüringer Bachfestschrift* for 1950 contains an article, *Die Meisterzeit Bachs in Weimar*, which tries to elucidate the extraordinary innovations of the years 1714 to 1717. The article sets out from the conviction that Bach's Church music written in Weimar should not be regarded as a mere preliminary stage to the later Leipzig Church music, but as a self-contained entity,

with totally different resources and aims. It is certain that in those years the young composer felt himself in harmony with his time, for the various ideals of his generation find here in organ works and Church Cantatas the most personal and convincing expression. If we are looking for new tendencies in Bach which point to future practice, then it seems natural to turn to his revolutionary Weimar period.

Philipp Spitta felt that the importance of the Weimar Cantatas lay less in the choruses than in the solos and duets. There again the outstanding compositions are those in which the emotional sincerity of Salomon Franck's poetry has stimulated the composer's imagination. The great essays of 1715 are centred in those arias which for the first time invoke the magical power of a melody more *expressive* than had ever been known before. The introduction to Cantata No. 161, *Komm du süsse Todesstunde,* a contralto solo with two flutes, anticipates the sighing motive of the *Empfindsamkeit;* and the same melodic style appears in the wonderful soprano aria with flute and viola d'amore in Cantata No. 152, *Tritt auf die Glaubensbahn.* In both cases Bach indicates by means of slurs the exact phrasing he wants, and he does the same in the soprano aria with oboe and strings, 'Letzte Stunde, brich herein', in Cantata No. 31, *Der Himmel lacht, die Erde jubilieret.* In these three Cantatas composed in 1715 Bach established the melodic style the 18th century was looking for, a style capable of expressing the deepest emotion. It only had to overflow from the Church into the general stream of musical life to become available both to the *Empfindsamkeit* and to the Viennese classical period. It is worth remembering in this connexion that Carl Philipp Emanuel Bach was born in Weimar in 1714.

But the great Weimar period was marked by experiments of quite another kind, again full of promise for the future. Bach was evidently trying to make his music so clear and penetrating that it would 'speak' to the listener and bring home to him the meaning and character of the text. This 'graphic' power of music was one of the chief preoccupations of the 18th century, with the inevitable result that polyphony retreated step by step as the song-like melodic element gained ground. It is extraordinary how close the thirty-year-old Bach approaches to the *principle of the Lied*; but this principle is already less important to him in Cöthen and far less so later on in Leipzig. The simple, symmetrical themes, so typical of the Weimar period, as well as the lucid structure of most of the instrumental movements, are found side by side with a song-like form that is one of Bach's most important achievements. The Chorale Preludes which appeared in 1717 in the so-called *Orgelbüchlein,* have always aroused wonder on account of the eloquence and symbolism of their accompaniments. Albert Schweitzer even describes the *Orgelbüchlein* as the 'dictionary of Bach's musical language'. Yet this is a work of supreme importance from another point of view as well. Philipp Spitta already saw Bach's organ Chorale as something 'specially his own'. But this expression is far too mild to convey the extraordinary boldness with which Bach struck out into the future.

In the *Orgelbüchlein* the melody of the Chorale is almost always a genuine song, which with its natural and very lightly stressed rhythm is entrusted to the soprano part. It should therefore be followed actively and even inwardly sung by the listener. The inner parts and the obbligato pedal provide an accompaniment which expresses the underlying emotion and keeps to the same pattern from beginning to end. In the uniform progression of this expressive accompaniment we find already the hallmark of Bach's mature style. The vitality of most of the pieces depends on the interplay of a singable melody and a basic accompaniment, which interprets the emotional or symbolic content but is worked out according to its own laws. This polarity must be Bach's own invention, for we do not find it in the music of any of his contemporaries, not even in that of the admirable Johann Gottfried Walther living in Weimar itself. Walther's organ Chorales often show an affinity with Bach's but are never developed with the same consistency. We shall not find a genuine parallel until the 19th century. For Bach's Chorale Prelude is nothing else than the prototype of the Romantic Lied, as it appears a hundred years later with Schubert. *Gretchen am Spinnrade* and the *Erlkönig* belong to a very different world of feeling but are constructed on the same principle. Did any other composer anticipate this with such clarity and consistency as Bach in his Weimar period? It is true that his *Orgellied ohne Worte* remained undeveloped first because he himself abandoned this Lied-like genre, and secondly on account of the general neglect of the organ after his death. Thus the Romantics had to discover all over again a constructive principle which Bach could have handed on to them.

Important as were the innovations of the Weimar period, Bach made others still more significant in a historical sense—in Cöthen between 1717 and 1723. These were discussed during the 1950 Musicological Congress at Lüneberg, in a lecture given there on *Charakterthema und Erlebnisform bei Bach*. During his five-and-a-half years at Cöthen, the most fruitful period of his career, Bach concentrated on instrumental and chamber music. The instrument that now supplants the organ as the focus of day-to-day music-making, is the *Klavier*. Bach's eldest son, Wilhelm Friedemann, learnt his music at this instrument. The Klavier becomes the medium *par excellence* of teaching, improvisation and formal conception, i.e., of an intimate method of composition rarely known before. It is precisely in such conditions that one would expect to find innovations pointing to the future. Nowhere else in Bach do we feel such a spontaneous expression of his personality, or such freshness of improvisation, as in the keyboard pieces written in Cöthen after 1720.

Bach's *Well-tempered Clavier* could never have become the Bible of every keyboard player had it drawn only on the past and bequeathed nothing new to the future. Indeed we can define the very point where, in carrying on from the past, Bach changes direction, so that a new goal comes into view. This applies to the Preludes as well as to the Fugues. Let us turn our attention to the Second Book of the ' 48 ', completed in Leipzig but containing some earlier compositions and in any case only confirming and strengthening the tendencies shown in the

Cöthen period.   It was no anachronism for Bach to write fugue after fugue while
he was in Cöthen: only later did the fashion turn increasingly against 'artificial
fugues and intricate partitas'.   Around 1720 the fugue was a form which satisfied
the fundamental demand for music that flowed uninterruptedly.   Bach seems to
have been the one musician who exploited the possibilities of this situation fully,
and so pointed the way to the future.

    If the principle of uniform progression was to justify itself, then the theme
had to be strong enough to impose its character on the whole fugue.   The compo-
sition had to grow inevitably out of the theme as out of a germ-cell.   Everything
hinged on the invention of the 'subject'.   Thus we see in the *Well-tempered
Clavier* the transition from themes that were merely types to those of a unique
individuality.   A comparison between the F minor and the A minor Fugues of
the Second Book shows clearly how a typical 17th-century formula is transformed
through shaping, contrast and increased   rhythmic intensity into something
completely new and peculiar to Bach.   It was dance-music above all that provided
Bach with characteristic themes for his fugues.   To take a famous example, he
uses a Netherlands folk-song as the theme of his great organ Fugue in G minor
—probably written in 1720.   What is more, thirteen fugues from the *Well-tempered
Clavier* have themes similarly derived from songs or dances.   The Gavotte and
the Bourrée serve as models (in the C sharp major Fugue from Book I and both
F sharp major Fugues), Minuet and Passepied (in the F major Fugue from Book I
and the B minor Fugue from Book II) and of course the Gigue (in the G major
Fugue from Book I and the F major Fugue from Book II).   Other themes,
such as those of the B flat major Fugue in Book I and the E minor Fugue in
Book II, are freer in character but nevertheless constructed like a song on a
foundation of symmetry.

    All these themes have an intensity of character never found before Bach.
They make a unique and unforgettable impression.   We see here the pregnant
instrumental theme of modern times.   It embodies an emotion of so definite a
stamp that it is possible to develop from it a movement of considerable size.
This kind of theme enabled wordless instrumental music to develop those large
forms that made it first the rival of vocal music and then very soon its superior.
It is easy to understand why the *Well-tempered Clavier* was never forgotten and
why it continued to influence successive generations of students everywhere, even
during the 18th century.   It was only by chance that Beethoven grew up with
this music; but the fact that he remained faithful to it and when he was in Vienna
used constantly to play from the *Well-tempered Clavier* 'as an evening prayer'
shows the respect and sympathy he felt for it.   He well understood the idiom
of Bach's keyboard music, in which in fact we find the origin of the ' symphonic '
theme of the Viennese classics both in a technical and a spiritual sense.

    The Preludes of the *Well-tempered Clavier* lead us in a different direction.
Around 1720 even pieces of this kind in free style had to adhere to the principle
of uniform progression.   As a result, Bach's usual practice was to take a figurative

pattern and develop it throughout the prelude. The exercises he wrote for Wilhelm Friedemann often do not disguise the fact that they are exercises. But most of these preludes appear in the *Well-tempered Clavier* in expanded form, in fact they often end with a climax in the nature of a free improvisation. The *Toccata,* which had existed since the 16th century, was an attempt to capture, in all its spontaneity, the process of improvisation on a keyboard instrument. The *Fantasia* of Bach's time is in many respects its successor. But with Bach the Toccata principle just described is realized with marvellous power. Improvisation leaves its mark on works of other kinds, so that music everywhere takes on an absolutely new dynamic through progression towards a climax and then a *diminuendo*. The Prelude in B flat minor from Book I surely represents the culminating point in this respect, with its powerful inner *crescendo* which reaches a *fortissimo*, as it were, with the tremendous long-held chord in bar 22, then breaks off abruptly—the music dying away in a short concluding passage.

This process of filling music with dynamic force occurs elsewhere. Notice for example how in the E major Violin Concerto the development-like middle section of the first movement ends in an improvised cadenza, in preparation for the return of the opening section. A real ' lead-in ' to the reprise, with *ritardando*, occurs in the E major Prelude of Book I of the ' 48 '; and Book II includes similar examples in the F sharp major Prelude and even in the E minor and F major Fugues. The crucial rôle of harmony in these experiments is shown especially by those final climaxes which penetrate far into the realm of the subdominant. The whole significance of the B flat Prelude in Book II, for example, seems to be concentrated in the Neapolitan sixth in C flat just before the end. The same is true, more or less, of the F major Fugue in Book II and especially of the A flat major Fugue in this Book, a culminating point in Bach's harmony. Thus the structure both of the Preludes and the Fugues is impregnated with vital dynamic force. Of course it has long been recognized that Bach is as great a harmonist as contrapuntist; but his vital treatment of these resources often reminds us of the 19th century. Indeed it was Beethoven who followed Bach's lead and went further in the same direction.

Thus Bach's works do in fact contain many characteristics which point to the future. The expressive melodic style of the Weimar Cantatas of 1715 is completely taken over by the *Empfindsamkeit*. The song-principle gives rise to the organ Chorale Prelude of the 1717 *Orgelbüchlein*, which is the prototype of the Romantic Lied. As to the achievements of the Cöthen period, their influence was universally felt thanks to the *Well-tempered Clavier*. The instrumental character-theme that appeared in the fugues of 1722 was something entirely new; and it led directly to the Viennese classics. Last of all, the invention of a vital instrumental form, with harmony as its chief resource, provided a basis without which the music of the 18th and 19th centuries is inconceivable. Here we see a force which Bach was the first to call into existence and which was utterly to transform the nature of our music.

All these features stand only on the circumference of Bach's work as a whole. Yet they are an essential part of his artistic achievement. They form a link with the future. Further features of this kind will certainly be found once we begin to look for them and once we consider seriously the problem of Bach's effect on his contemporaries and on posterity. His work is a synthesis of old and new. Not only does it represent a great tradition which reveals its splendour for the last time; it also contains the 'fundamental innovations' mentioned earlier on.

All this fits in with the definition we gave of an 'inaugural period' of the kind that occurred twice in medieval music. We may indeed compare Bach with Pérotin and Dufay, those masters who were earlier described as founders of their age. Both dominate the course of history through the greatness of their achievements. And so it is with Bach. His art, like theirs, is not only a final summit, the end of a tradition; it is also a beginning.

' O GIN MY LOVE '

O gin my love were yon red rose,
That grows upon the castle wa'
And I myself a drap of dew
Down on that red rose I would fa'.

O my love's bonny, bonny, bonny
My love is bonny and fair to see
Whene'er I look on her weel-far'd face
She looks and smiles again to me.

O gin my love were a pickle of wheat
And growing upon yon Lily lea
And I mysell a bonny wee bird,
Awa wi' that pickle o' wheat I wad flee.

O gin my love were a coffer o' gowd,
And I the keeper of the key.
I wad open the kist whene'er I list,
And in that coffer I wad be.

'O GIN MY LOVE'

Iain Hamilton, Op. 20 No. 3

HANDEL RECONSIDERED

Winton Dean

Professor Abraham remarks in the Preface to his new Symposium[1] that of the greatest composers none is so proportionately unknown to the general musical public—and, he might have added, to a great many musicians—as Handel. With *Messiah* still defiled by 'the filth of two centuries' and revered by millions for what it is not, a book that subjects the mass of Handel's work to critical reassessment was badly needed. Light is thrown on many dark places, and if others remain grimy there is still the chance that the book will stimulate further investigation of this half-understood composer. The materials for this task, as can be seen from Mr. William C. Smith's detailed and invaluable catalogue of works, are so easily accessible to us in England that scarcely anyone has bothered to look at them and no one has ever studied them in full.

Six authors in addition to the editor contribute critical chapters. Professor Dent's study of the operas is, with the possible exception of Streatfeild (to whom he pays honourable tribute), the best thing we have on the subject. His policy of 'cherchez le librettiste' may annoy those musicians who think they can understand an opera after one glance at the words, and occasionally he may seem a little severe on ravishing but undramatic pieces of work (such as the aria 'Va tacito' in *Giulio Cesare*); but he is undoubtedly right to approach the operas as works of art and not a series of in- and out-trays. Their great fascination lies in the struggle of a first-rate musical dramatist with an impossible form that conceded everything to the singer and almost nothing to the composer. Professor Dent is outspoken about their limitations: 'the drama results from a perpetual series of understatements and misunderstandings, because every character acts at once on impulse without ever asking for explanations, let alone listening to them or using elementary common sense as a basis of action, such a thing being quite incompatible with the exalted principles of chivalry'. Of the musical deficiencies of the form, the deadly monotony of the *da capo* aria and the scarcity of ensembles and chorus, he says rather less, but he emphasizes the important stylistic difference between the operas composed for the European celebrities of the Faustina-Senesino period and those written for inferior singers after 1729. It is the latter that are more suited to revival: 'what is absurd and false in some of Handel's heroic operas is not the exaggeration of virtue, which great music can always make convincing, but the exaggeration of virtuosity'. The whole chapter is lit by a

[1] *Handel*, a Symposium edited by Gerald Abraham (Oxford University Press, 25/-).

characteristic dry humour; but the summaries of the plots, especially of *Admeto*
and *Ariodante* (whose hero takes his mistress ' to the best hotel in St. Andrews '),
are so hilariously funny that there is some danger of literal-minded persons confusing
what was meant quite seriously with the lighter intentions that Professor Dent
discovers in one or two of the later operas.   He tells us, incidentally, that in Act II
of *Admeto* ' Hercules comes down with Cerberus on a lead '; but would one lead
be enough?   There is one small inaccuracy: *Jupiter in Argos* did see the stage,
at the King's Theatre on 1 May 1739.

Mr. Julian Herbage, to whom fall the oratorios, masques and serenatas, had
a more difficult task, since his field is more encumbered with false traditions and
has never been cleared by research.   It was a mistake to divide the ' sacred ' and
' secular' works into two chapters, for there is no difference in style or approach
between *Semele* and *Hercules* on the one hand and *Saul* and *Belshazzar* on the
other.   The true distinction is between the works with a fully dramatic framework
(the great majority) and those without it.   Mr. Herbage has frequently been led
astray by others, including Chrysander (for instance over the 1732 version of
Esther); but he has not always made full use of available sources.   If he had
examined the autographs he could never have said that *Alexander's Feast* was
one of the few works in which Chrysander followed the printed score rather than
Handel's manuscript.   Chrysander's edition unhappily was never based on the
autographs, but on the so-called conducting copies now in Hamburg; hence many
of its errors and omissions.   And why does Mr. Herbage say that most of Handel's
librettists were at least twenty-five years his junior when this is not true of a single
one of them?   *Saul* is not the only oratorio with trombone parts; *Athalia* is con-
sistently mis-spelt (not only by Mr. Herbage); the text of *Samson* hardly became
the archetype of the later oratorios, which varied widely in plan; *Saul*, not *Samson*,
was the first oratorio in which English singers came into their own; *Judas
Maccabæus* was not played more often in Handel's lifetime than *Messiah*.   Mr.
Herbage is rather haphazard in his references to borrowings and alterations.   Of
the five Clari borrowings in *Theodora* he mentions only the one quoted by Sedley
Taylor; yet he quotes as Handel (Ex. 34) a piece of vintage Clari, published in one
of Chrysander's supplements.   He says of *Judas* that ' not content with the popu-
larity of his score, Handel later interpolated successes from other works ': but this
was his invariable habit in all oratorio revivals.   Incidentally ' Wise men flattering '
was written not for *Judas* but for *Belshazzar* (in 1758); and its main theme would
have come in very aptly in Professor Abraham's discussion on page 267: it begins
exactly like Ex. 101.   Mr. Herbage says that the 1757 *Triumph of Time and
Truth* ' can in no way be described as a pasticcio '.   But it contains very little new
music: to the seven or eight quarries here cited may be added *La Resurrezione,
Rodrigo, Lotario*, the 1713 Birthday Ode, the 1732 version of *Acis and Galatea,
Deborah, Athalia, Susanna*, and at least four Italian cantatas.   *Deborah* too is
more of a pasticcio than is indicated here.

More disturbing are what appear to be some strange vagaries of taste.   Mr.
Herbage's predilection for *Joshua* and the *Occasional Oratorio* (' one of Handel's

most majestic conceptions ') suggests a secret hankering after the days of the
Crystal Palace blockbuster festivals, especially when taken in conjunction with his
strictures on some of the subtlest music in *Belshazzar*, *Solomon* and *Alexander
Balus*. His surely disproportionate praise of *Messiah* (' more continuously inspired
than anything Handel ever wrote ', ' perhaps the most remarkable work ever
created by human mind ') and the ' Hallelujah ' chorus in particular (' the climax
of everything that Handel wrote for chorus ') underlines his lack of response to
one whole side of Handel's genius. The wonderful little chorus in *Belshazzar*
in which the wise men confess their ignorance is condemned as ' almost ludicrously
brief and banal ', and the chorus of ruffians who abduct Cleopatra in the middle
of an air (*Alexander Balus*) as ' perilously near the comic '; yet in their context
these are two of Handel's most brilliant strokes of musical theatre. It is perhaps
significant that Mr. Herbage makes no attempt to examine the structure of the
oratorios in detail, or to discuss the musical and social conditions of their
performance. So often he seems to pick out for objurgation a piece that surely
calls for special praise, such as ' Thus when the sun ' (*Samson*) and ' With thee
the unshelter'd moor ' (*Solomon*) (' no more than a pretty ballad tune '); and why
does he refer politely to the Queen of Sheba's dullish first air while omit-
ting all mention of her second (' Will the sun forget to streak '), one of the
peaks of Handel's creation? It would however be unfair to ignore his many
shrewd comments, for instance his appreciation of Jennens' libretto for *Saul*
and his remarks on the relevance of *Semele* to English opera composers of all
periods. Occasionally he hits the nail on the head when apparently not looking
at it, as in his statement that ' the inequality of *Alexander Balus* remains a puzzling
phenomenon, and seems to indicate that Handel worked far more through the
inspiration of words than most critics are inclined to admit '. Handel in his later
years was intensely susceptible to the English language (Dr. Percy Young makes
the point in his chapter on *Handel the Man*) and often set it with sublime skill:
has there ever been a more perfect marriage of music and English words than the
nightingale chorus in *Solomon*? That is one reason why his association with
Morell (whom Mr. Herbage ranks far too high) caused such an abrupt, if temporary,
decline in his musical inspiration.

Of the remaining chapters, those by Professor Anthony Lewis on the chamber
cantatas and Mr. Basil Lam on the church music and orchestral music are full
of excellent criticism. Mrs. Dale mars a painstaking summary of the keyboard
works by not taking into account the instrument for which they were written
(Handel's harpsichord music suffers far more than Bach's from translation to
the modern piano), and Mr. John Horton, in coming to grips with the chamber
music, is frequently reduced to chasing his own tail in his endeavour to sort out
Handel's repeated use of the same music in different contexts—a form of contortion
endemic among Handelians. Mr. Lam is inclined to assume a fiercely defensive
posture when confronted by the leonine spectre of J. S. Bach, but he has the excuse
that Bach-lovers have mouthed an intolerable deal of twaddle about Handel.
He is particularly apt in his choice of passages for comment and quotation,

and he brings out very well the important fact that Handel consistently satisfied ' the inner content of a form without being over-concerned with contractual obligations to produce a text-book specimen '. Hence his ' supreme mastery of composition has been underrated merely because it is less readily analysable in terms comprehensible to scientific and non-musical minds than is the profound logic of Bach's *ars combinatoria* '. But Mr. Lam's assertion that Handel's greatness could be measured by the Chandos Anthems alone is excessive, and so is his enthusiasm for the organ concertos, though he is right to defend them from ' the deplorable resources of the modern or Victorian organ '.

Professor Abraham's final chapter on *Some Points of Style,* though the shortest, is in some ways the most stimulating of all. He discusses Handel's stylistic relationship to his contemporaries, a matter still only half explored, by calling such shy witnesses as the operas and symphonies of Christoph Graupner and Mattheson's *Boris Goudenow;* and he scrutinizes that life-long habit (never examined in detail) of taking up an old phrase or fragment of ritornello and generating from it a fresh movement—and repeating the process with the same phrase, often in the same key, over and over again. This improvisation with *incipits* must have a psychological origin, springing perhaps from an innate difficulty in setting the creative process at work. It could be related to Professor Dent's theory, propounded elsewhere, that it was some form of mental illness that drove Handel about 1737-38 to a rare burst of wholesale borrowing *without* improvisation. This aspect is not discussed; nor is there a mention of Handel's autograph collection of *incipits* from Habermann and Graun, many of them used later in *Jephtha* and elsewhere, in the Fitzwilliam Museum. Professor Abraham releases many such hares but refrains from chasing them. He does however drop provocative footnotes wherever he goes, and one or two of these offer matter for debate. On page 91 he surely allows too much weight to the arguments of Percy Robinson concerning the borrowings in *Israel in Egypt*; and a recent paper read before the Royal Musical Association by Dr. Edward Allam makes it much easier to accept the Stradella serenata as authentic both on historical and stylistic grounds. Seiffert was indeed a bonny builder of mares' nests, but the one spotted in the note on page 197 was Handel's own: the fugue subject in the *Judas Maccabæus* overture is the neatest fusion of the Telemann theme with that from the duet *Sono liete*. And it pleased Handel so much that he used a variant in the ritornello of the chorus ' Disdainful of danger ' in the same work:

Handel: Vocal duet "Sono liete"

Telemann: "Musique de Table", 2nd Production, no. 3, 3rd mov.
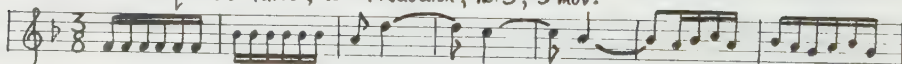
Handel: "Judas Maccabæus", Overture

Handel: "Judas Maccabæus", ritornello of chorus "Disdainful of danger".

Professor Abraham ends by pointing to the constant liveliness of Handel's mind and the numerous 'unconventionalities of melody, harmony, rhythm, and scoring that leap out at every period' of his career. His very proper attempt to aid scholarship by disentangling the borrowings and self-borrowings may obscure for some readers Handel's wonderful power of melodic invention, to which not all the contributors do justice. We might also have been given a chapter on Handel's orchestra and the circumstances in which his music was performed—a factor material not only to performance to-day but in some cases (such as the oratorios) to any sort of understanding. It is still too commonly supposed that Handel wrote down a mere percentage of his music and adapted it *ad hoc* to whatever instruments happened to be knocking around—an uncouth assembly, perhaps, containing one viola and dozens of oboes and bassoons, bleating and grunting like cattle in a fog, reinforced by a bottom-heavy bass and the indefatigable footwork of the organist. The truth is far different. Handel was one of music's supremely great orchestrators (far more so than Bach), and requires no assistance in the way of 'additional accompaniments' from the modern rostrum-robot or anyone else; nor would a little working-to-rule on the part of organists do any harm, especially in the oratorios. It is true that in a very few works, such as the organ concertos written for his own use, Handel left much of the music in his head; it is also true that the question of ornament, vocal and instrumental, presents difficulties, and that the harpsichordist has to play from a skeleton part. But the art of continuo playing has been revived, and the discovery of an eighteenth century vocal style may not be wholly out of reach; more is known about it, and about the size and composition of Handel's choirs and orchestras, than we are told in this book. We can give performances approximating to Handel's intentions and his practice, and we sometimes do. But the petrifaction deplored by Professor Abraham needs more dynamite in the form not only of a far greater range of such performances (most of Handel's greatest music is utterly unknown) but of a thorough and lucid exposition of the conditions obtaining in Handel's time and the principles upon which he worked.

THE POSSIBLE CHORDS IN
TWELVE-TONE MUSIC

George Perle

In a footnote to his excellent and illuminating article on the twelve-tone system, Roberto Gerhard[1] points out the errors in Alois Hába's calculations of the number of different harmonic combinations that are available when the octave is divided into twelve equal parts.[2] Gerhard fails to explain the procedure by which he arrives at a revised table of possible chords.   Unfortunately, most of his figures are also incorrect.

Both Hába and Gerhard intend to exclude transpositions of chords in their calculations, since the problem concerns the number of chords of *different* total intervallic content.   Gerhard correctly explains the nature of Hába's errors: ' Hába lists, for instance, these as different chords: *c-d-g* and *c-f-g*. They are not; the second—take it in its first inversion, *f-g-c*—is nothing but a transposition of the first one, a fourth up. Hába goes on repeating this same mistake over and over again without ever detecting the identity of a chord when it appears in transpositions or inversions which look different to the eye.'

Gerhard's own table is as follows:

<div align="center">

19 three-note chords
42 four-note chords
66 five-note chords
80 six-note chords
80 seven-note chords
66 eight-note chords
42 nine-note chords
19 ten-note chords
 1 eleven-note chord

</div>

Even without subjecting the individual figures to proof, it can be established at once that a number of them are bound to be wrong because of the absence of appropriate symmetry in the table.   Clearly, since only the content of each chord is to be specified and not the particular order of arrangement of the notes constituting the chord, the

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[1] Roberto Gerhard, *Tonality in Twelve-Tone Music, The Score*, May, 1952.

[2] Alois Hába, *Neue Harmonielehre*, Fr. Kistner & C. F. W. Siegel, Leipzig, 1927.

elements which remain after each of the different three-note chords is in turn sub-tracted from the chromatic scale will constitute all the different nine-note chords, and vice-versa. Similarly, the number of eight-note combinations will be identical with the number of four-note combinations, the number of seven-note combinations with the number of five-note combinations, etc., the only unique figure being the number of six-note chords.

The proper symmetry is displayed in the following table of the number of chords in general, that is, including all transpositions:

> 12 one-note " chords "
> 66 two-note chords
> 220 three-note chords
> 495 four-note chords
> 792 five-note chords
> 924 six-note chords
> 792 seven-note chords
> 495 eight-note chords
> 220 nine-note chords
> 66 ten-note chords
> 12 eleven-note chords

The theorem which determines the above figures is as follows : '*The number of combinations of n different things taken r at a time equals the number of permutations of n different things taken r at a time, divided by r* !'[3] In the present instance n is twelve, of course, and r is the number of notes in the chord. The symbol r! repre-sents the product of r multiplied by all the integers lower than r. If we wish to determine the number of four-note chords, for example, we must first find the number of permutations of twelve different notes taken four at a time and divide this result by $4 \times 3 \times 2 \times 1$, or 24. The formula for finding the number of per-mutations is $n(n-1)(n-2)\ldots(n-r+1)$. In connexion with our four-note chords this means $12 \times 11 \times 10 \times 9$, or 11,880. Dividing by 24 we get 495, the total number of four-note chords, including transpositions. But if we wish to find the number of *different* chords we must exclude transpositions, which would apparently be the result of a further division by 12. But 495 divided by 12 is $41\frac{1}{4}$, which obviously cannot be correct since the number of four-note combinations would necessarily be a whole number. The mystery is solved when we realize that there are three chords which divide the octave symmetrically in such a way that the sum of their transpositions (we include the identity operation) is $1\frac{1}{4}$ of 12:

> c—$c\sharp$—$f\sharp$—g (6 transpositions)
> c—d—$f\sharp$—$g\sharp$ (6 transpositions)
> c—$e\flat$—$f\sharp$—a (3 transpositions)

[3] William L. Hart, *College Algebra*, D. C. Heath & Co., New York, 1938, Chapter xx.

We arrive at our final result, 43, therefore, by subtracting $1\frac{1}{4}$ from the above quotient and adding 3 to the difference.   And this determines that the number of possible eight-note chords, excluding transpositions, must also be 43.

We reach precisely the same solution if we adopt another, purely ' musical ' method, involving no algebraic formulae and no mathematical calculations except addition.   To the following base of three notes

<p style="text-align:center;">c—c♯—d</p>

we add in turn each of the remaining notes of the chromatic scale except *b*, which is omitted since it provides no new chord but merely a transposed inversion (*c-c♯-d-b*) of the first chord (*c-c♯-d-e♭*).   There   are   thus   eight   different combinations which will be based upon the same three-note group.   Let us maintain the *c-c♯* as a sub-base and generate a third element by raising the pitch of the latter a semi-tone for each series of operations.   The following additional dissimilar combinations will result:

BASE	4TH NOTE	NO. OF COMBINATIONS
c—c♯—d♯	e to b♭	7
c—c♯—e	f to b♭	6
c—c♯—f	f♯ to b♭	5
c—c♯—f♯	g to b♭	4
c—c♯—g	a to b♭	2
c—c♯—g♯	b♭	1

There are no more combinations including a semitone and we must be on guard to exclude this interval and its inversion in subsequent operations.   The combinations *c-c♯-g-g♯* and *c-c♯-g♯-a* are excluded because they are transposed inversions of earlier constructions (*c-c♯-f-f♯* and *c-c♯-e-f*, respectively).   The next step is to raise the second element and to operate as above upon a new sub-base:

BASE	4TH NOTE	NO. OF COMBINATIONS
c—d—e	f♯ to a	4
c—d—f	g to a	3
c—d—f♯	g♯ to a	2

At this point the combinations which contain a whole-step are exhausted and again it becomes necessary to raise the second element:

BASE	4TH NOTE	NO. OF COMBINATIONS
c—e♭—g♭	a	1

It will be seen that further operations can generate only transposed inversions of chords already given, and that the number of four-note chords discovered is 43, as confirmed by the algebraic procedure.   Whichever method we adopt will prove the following table of differently constituted chords to be correct:[4]

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[4] Being considerably less than an amateur in mathematics, I originally contrived this table by working out all the chords and totalling the results, as explained above.   In discussing this problem with a student at the University of Louisville, Mr. Pohlmann Mallalieu, I was surprised to learn that he had been working on it independently and had arrived at the same figures by means of the algebraic method.   I am indebted to him for explaining this method to me.

1 one-note " chord "
6 two-note chords
19 three-note chords
43 four-note chords
66 five-note chords
80 six-note chords
66 seven-note chords
43 eight-note chords
19 nine-note chords
6 ten-note chords
1 eleven-note chord

There really has never been an excuse for error concerning the number of six-note combinations since Hauer's publication of his twelve-tone theory, which is based upon these.[5] Hauer arranges the 80 hexachords in pairs, which he calls 'tropes', each trope consisting of twelve non-repeated notes. Since there are eight hexachords each of which will generate a trope when combined with a transposition of itself, the total number of different tropes, excluding transpositions, is 44.[6] An excellent description of the primary axioms of Hauer's system is found in the above-mentioned article by Roberto Gerhard:

'Variations affecting the position of the notes within the unit [i.e., the hexachord] . . . are, of course, the result of permutation. . . . The acceptance of the principle of permutation (within antecedent and consequent) [is] based on a recognition of the fact that beyond the actual series there is an ultimate ground, an abstract archetype—represented by the coupled hexachords—of which the individual series is only one *aspect*, that is, one of the possible permutations. . . . To sum up: the identity of the series will be maintained in spite of permutation, provided that this takes place exclusively within the constituent units. . . . This seems to me to confirm the view that the fundamental idea of the twelve-tone technique is in fact a new formulation of the principle of tonality.'

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[5] Josef Hauer, *Vom Melos zur Pauke*, Universal-Edition, Vienna, 1925.

[6] Certainly not 77, as stated in the article *Twelve-Tone Technique* in the *Harvard Dictionary of Music*, by Willi Apel, Cambridge, Mass., 1946.   77 is the quotient of 924 (the total number of six-note chords) divided by 12 in order to exclude transpositions. But there are five combinations which divide the octave symmetrically in such a way that the sum of their transpositions is not 12 × 5, but 12 × 2. We must therefore subtract 2 from 77 and add 5 to the difference. This results in 80 six-note segments, paired by Hauer into 44 tropes as explained.   The symmetrical segments are as follows:

c—c♯—d—f♯—g—a♭ (6 transpositions)
c—c♯—d♯—f♯—g—a (6 transpositions)
c—d—d♯—f♯—g♯—a (6 transpositions)
c—d—e—f♯—g♯—a♯ (2 transpositions)
c—c♯—e—f—g♯—a (4 transpositions)

Strangely enough, Gerhard does not so much as mention Hauer in his article, in spite of the great importance which he rightly attaches to the principle he describes in the above quotation.   His intention is to explain how and why Schönberg modifies his ' serial ' technique, which is premised upon an inviolable ordering of the elements of the tone-row.   Gerhard suggests that the future of twelve-tone music lies in further exploitation of the simultaneous employment of serial and permutational modes of treatment.   It seems only fair to mention Hauer in connexion with this development, which involves, at least as far as primary precompositional assumptions are concerned, the incorporation into general twelve-tone practice of precisely those concepts which originally distinguished Hauer's theories from Schönberg's.

We suggest not only a statistical revision of the table of possible chords, but also a revised estimate of the contribution of Josef Hauer, whose theoretical work points the way to an understanding of certain aspects of their function in twelve-tone composition.

REPLY TO GEORGE PERLE

I must thank Mr. Perle for pointing out the errors in my table of chords. He is quite right: there are 43 four-note chords, not 42, as stated by me. The chord I missed out is, oddly enough, that of the diminished seventh. I must be allergic to the chord of the diminished seventh ; I suspect that it must have been blotted out of my consciousness altogether a long time ago. How else I should so persistently have missed it out, I cannot think ; especially, considering how often I have had to work out and draw up all over again the complete catalogues of chords since, unfortunately, I keep on mislaying or losing them. For this very reason I was also quoting from memory when I gave my figures in a footnote to my article *Tonality in Twelve-Tone Music* referred to by Mr. Perle. As he justly points out, I got my symmetry wrong. It is Mr. Perle's table which is correct, except for the fact that it is incomplete: he too misses out one chord, and that none other than the twelve-note chord itself.

I suggest that this all-important chord be added to Mr. Perle's table as the closing member. Thus

1 twelve-note chord

will, of course, correspond in symmetry, to one heading the list as

1 zero-notes chord

—' all notes *present* ' corresponding symmetrically to a situation where all notes are, so to speak, *absent*. Let's be careful, though, lest a *dodécaphoniste enragé* should seize on this figure-symbolism as ' proving ' that the only logical alternative to writing twelve-note music is ' silence '.

I know far too little of Hauer's music and theories, I regret to say, to feel justified in attempting a fair estimate of his contributions. But many of us, I feel sure, would greatly welcome such a revaluation. Perhaps Mr. Perle himself could oblige.

As far as Mr. Perle's wish for a statistical revision of the possible chords is concerned, I am perfectly sure that his own table, with the addition indicated above, is the final answer. I am indebted to Mr. Martin Ryle, of Trinity College, Cambridge, for the calculation of the number of possible different chords: it confirms Mr. Perle's figures, with the addition of the 0–12 correspondence which is, obviously, an integral part of the whole symmetry.

To end this exchange of views between Mr. Perle and myself also on a note of symmetry, it only remains for me to question his figure of 44 ' tropes ' which he quotes from Hauer. The correct figure, by a pleasing coincidence, is, I maintain, 43(!)

Few readers, I imagine, will be able to follow him when he writes: 'Since there are eight hexachords each of which will generate a 'trope' when combined with a transposition of itself, the total number of tropes, excluding transpositions, is 44'. I'm afraid that does not follow. Several links seem to be missing in his reasoning here which make the statement almost unintelligible. I should like to try and restore them.

By 'trope' (whatever the justification for the name adopted by Hauer) we understand the coupling of two hexachords which include, between them, the complete series of 12 notes. It follows from this that in order to indicate any particular trope, it is enough to name one of the hexachords—say, the first ; since there is only one other companion hexachord which will fulfil the condition just given. It will be found that there are three different types of tropes: *a* tropes in which the second (or companion) hexachord is simply a transposition of the first ; *b* tropes in which the second hexachord is a mirror of the first ; and *c* tropes where the coupled hexachords are structurally different, lacking any symmetry. Now, the number of *a* tropes is, apparently, 8 ; that of the *b* tropes is 11, and that of the *c* tropes 25, totalling, in effect, 44. Yet to arrive at these figures it was necessary to premise that the correct definition of the 'trope'—like that of a twelve-note series— comprises its four *aspects,* namely, its direct form, its retrograde, its mirror and the retrograde of the mirror. In consequence any two 'tropes' which can be shown to stand in mirror-relation to one another are not different autonomous 'tropes', but simply different *aspects* of one and the same 'trope'. Among the 'tropes' of type *a,* this is the case for the following two: —

c, d♭, e♭, e♮, f, a♭/f♯, g, a, b♭, b♮, d

and

c, d♯, e, f, g, a♭/f♯, a, b♭, b♮, c♯, d

One of the two must therefore be discounted ; the number of *a* tropes is therefore 7, not 8, and the total number 43, not 44.

With the use of visual symbols this could be taken in at a glance. For some time I have adopted the ordinary punctuation signs as symbols for indicating the interval-structure of hexachords. Since the second, the companion-hexachord, is always implied in the naming of the first, it is clear that a group of 5 signs will be sufficient to give the exact 'key-signature' of any 'trope'.

Here are the signs and their value:

    , = semitone

    . = 1 tone

    ; = minor third

    : = major third

    — = fourth

    ! = augmented fourth

The key-signature of the first of the two 'tropes' quoted above is therefore:

    , . , , ; / id.

and that of the second 'trope':

    ; , , . , / id.

which reveals their mirror-relation at a glance.

ROBERTO GERHARD.

HUMPHREY SEARLE ON LISZT

This is a valuable book[1] from several points of view. It gives essential information about all Liszt's works, and is an excellent guide to the student ; specially necessary as so much of Liszt's work is difficult to obtain. Even the now unobtainable Breitkopf Library Edition was far from complete and there are important major works like the *Dante* Symphony and the Masses which simply cannot be purchased at the present time, and the same is true of innumerable smaller works. The work done by the Liszt Society has been able up to now only to cover a very limited field. This is specially unfortunate in the case of Liszt where it is so desirable to know his work as widely as possible to arrive at a genuine understanding of its value. Liszt was one of the most uneven of composers, but it is not a case of being able to concentrate on a small body of first-rate work, and neglect most of the rest ; there are serious flaws in many of Liszt's best works, while beautiful and original pages occur frequently in compositions that are in the main quite trivial. Of all great composers Liszt had one of the richest and the least integrated personalities ; his mind was receptive to a degree that is dangerous in a creative artist and the intense sense of half-explored potentiality that one gets from his music is probably the main cause of the fascination that his work continues to exercise over so many thoughtful minds. The music of Chopin or Wagner, who were so much surer of themselves and whose work is so much more consistently successful, gives us to-day little feeling of fresh possibilities.

Admirers of Liszt are not always agreed about the relative value of different works and one is all the more grateful to Mr. Searle for refraining from over-dogmatism, though it is clear what his own preferences are. Every student of Liszt should read as widely as possible for himself, for on many aspects of his music there will never be widespread agreement among critics and experts. Mr. Searle thinks highly of the symphonic poem *Hamlet*, which such a keen admirer of Liszt as Bernard Van Dieren regarded as superficial and diffuse. With his view that the *Faust* Symphony and the B minor Sonata are the most satisfying of all Liszt's large-scale works there will be little disagreement. His book is inclined if anything slightly to over-stress the ' problematic ' side of Liszt, fundamental though that is. There is a distinctive charm in most of the later piano pieces and songs, but it is the charm of sketches ; it is very significant that in his later years Liszt seldom tackled the problems of large-scale construction. I do not think the Organ Fantasia on B-A-C-H nearly as interesting as Mr. Searle does, and find him, if anything, too tepid in his judgments of *Mazeppa* or the E flat Concerto or the Rhapsodies—though in part he is reacting against the former misconception that these pieces were Liszt's best works.

The book deserves to be praised for its concentration on the composer's music ; there will always be plenty of books on Liszt's personal affairs. One could only wish that the criticism had been more detailed. Mr. Searle is probably better qualified than anyone to write an exhaustive critical study of Liszt's music and its influence on later composers. Let us hope this book will one day be expanded and re-issued.

<div align="right">ROBERT COLLET.</div>

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[1] *The Music of Liszt*, by Humphrey Searle (Williams & Norgate, 25s.).